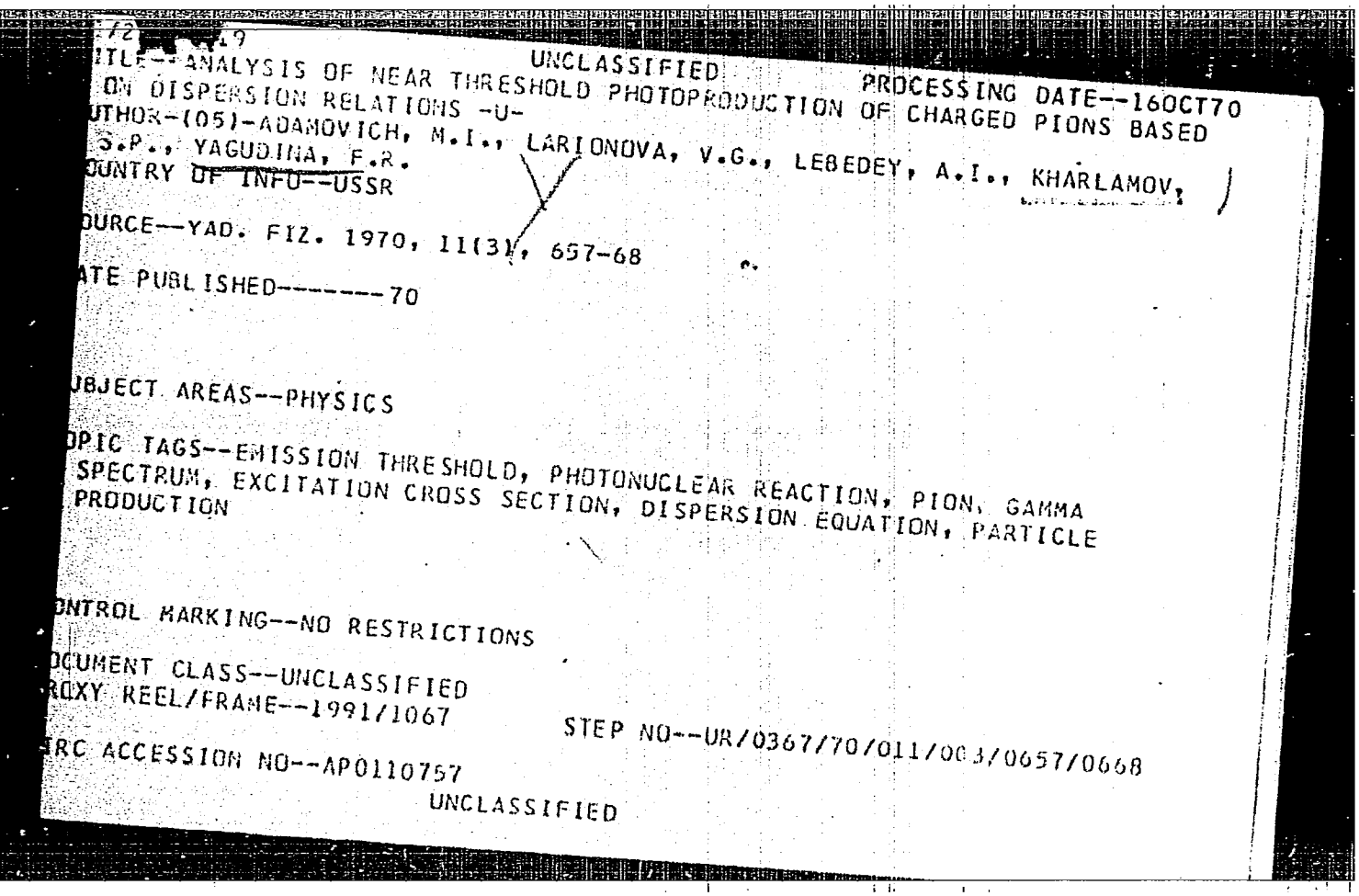

72 [redacted] 19 UNCLASSIFIED PROCESSING DATE--16OCT70

TITLE--ANALYSIS OF NEAR THRESHOLD PHOTOPRODUCTION OF CHARGED PIONS BASED ON DISPERSION RELATIONS -U-

AUTHOR-(05)-ADAMOVICH, M.I., LARIONOVA, V.G., LEBEDEV, A.I., KHARLAMOV, S.P., YAGUDINA, E.R.

COUNTRY OF INFO--USSR

SOURCE--YAD. FIZ. 1970, 11(3), 657-68

DATE PUBLISHED-------70

SUBJECT AREAS--PHYSICS

TOPIC TAGS--EMISSION THRESHOLD, PHOTONUCLEAR REACTION, PION, GAMMA SPECTRUM, EXCITATION CROSS SECTION, DISPERSION EQUATION, PARTICLE PRODUCTION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1991/1067 STEP NO--UR/0367/70/011/003/0657/0668

CIRC ACCESSION NO--AP0110757

UNCLASSIFIED

2/2 019 UNCLASSIFIED PROCESSING DATE--16OCT70

IRC ACCESSION NO--AP0110757

BSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE PHOTOPRODUCTION OF CHARGED PIONS IN THE NEAR THRESHOLD REGION OF THE PHOTON ENERGY IS INVESTIGATED THEORETICALLY. THE AMPLITUDE AND THE CROSS SECTION OF PHOTOPRODUCTION OF PIONS ON N AND THE AMPLITUDE AND THE DIFFERENTIAL CROSS SECTION FOR PI POSITIVE ON P ARE CALCD. THE RESULTS ARE COMPARED WITH EXPTL. DATA.

FACILITY: FIZ. INST. IM. LEBEDEVA, MOSCOW, USSR.

(UNCLASSIFIED)

UDC 620.193.5

USSR

MOVCHAN, B. A., KUZ'MIN, G. S., MOCHALOVA, T. F., KARATYSH, V. V., TIKHONOVSKIY, A. L., and ZAGUPOL'SKAYA, L. N., Academy of Sciences Ukrainian SSR, Institute of Electric Welding imeni Ye. O. Paton, Perm' Polytechnical Institute

"Corrosion of Nickel of Varying Purity in Gaseous Hydrogen Fluoride"

Moscow, Zashchita Metallov, Vol 7, No 1, Jan-Feb 71, pp 32-34

Abstract: A study was made of the behavior in gaseous hydrogen fluoride of commercially pure nickel NP-2A and ultrapure nickel refined by the electron-beam method in vacuum. A specially designed apparatus was used for the experiments, consisting of two communicating nickel ovens connected with a chemical absorber. Experiments lasting up to 120 hours were carried out at 550° and an HF pressure of 20 atm. The results indicate that the corrosion resistance of the ultrapure nickel in gaseous HF is five times higher than that of nickel NP-2A. The electron-beam re-

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USSR

MOVCHAN, B. A., et al., Zashchita Metallov, Vol 7, No 1, Jan-Feb 71, pp 32-34

fined nickel shows no intercrystalline corrosion. Consequently, nickel refined by the electron-beam method is recommended for the manufacture of nickel equipment. The electron-beam refining of nickel is also economically advantageous.

2/2

Nickel

USSR

UDC 620.195

YAGUPOL'SKAYA, L. N., Institute of Electric Welding imeni YE. O. PATON, Academy of Sciences UkrSSR

"Effect of Crystallographic Orientation on Anodic Oxidation of Single Crystal Nickel"

Moscow, Zashchita Metallov, Vol 6, No 6, Nov-Dec 70, pp 674-678

Abstract: This paper contains a study of the effect of crystallographic orientation on the process of anodic polarization of nickel in an acid environment, and it is a continuation of a previous study of the properties of very pure nickel. The procedure for obtaining single crystal nickel is described, and the polarization curves of single crystal nickel in 1 normal H_2SO_4 and the curves for the effect of temperature on the polarization characteristics of single crystal nickel with faces (110) and (100) are constructed. The polarization curves obtained at 25° for single crystal nickel with faces (111), (100), and (110) show that the anodic processes depend on the crystallographic orientation. The polarization curves for the face (111) at 45, 55, and 65° are almost the same as the curves for the face (100). This indicates that an increase in temperature to 65° has no effect on the stable passivation potential. It is

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YAGUPOL'SKAYA, L. N., Zashchita Metallov, Vol 6, No 6, Nov-Dec 70, pp 674-678

concluded that the polarization relations in the sections of complete passivation and superpassivation do not have any singularities and do not differ from the curves for polycrystalline nickel. The experimental data also establish that there is a linear relation between the logarithm of the anode current density at potentials of 0.17-0.23 volts and I/T. The step process of oxidation of single crystal nickel is presented, taking into account published data and the new suboxide theory of oxidation of transition metals of I. I. Kornilov. Application of this representation to anodic oxidation of single crystal nickel is discussed. It is concluded that the process of anodic oxidation of single crystal nickel depends on the crystallographic orientation of the surface and is determined by energy and geometric factors. The lattice defects are centers of formation of nickel compounds with oxygen.

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USSR

UDC 547.586 + 547.539

MILEVSKAYA, V. B., BELINSKAYA, R. V., and YAGUPOL'SKIY, L. M., Institute of Organic Chemistry, Academy of Sciences Ukrainian SSR

"Reaction of Homophtalic Acid With Phosphorus Pentachloride"

Leningrad, Zhurnal Organicheskoy Khimii, Vol 9, No 10, Oct 73, pp 2145-2149

Abstract: Reaction of homophtalic acid with phosphorus pentachloride yields a mixture of α,α-dichlorohomophtalic acid dichloride (I), 3-chloroisocoumarin (II), and 3,3,4,4-tetrachloro-3,4-dihydroisocoumarin (III). The latter can also be obtained from 3-chloroisocoumarin. Reacting PCl_5 with III leads to the formation of 1,1,3,3,4,4-hexachloroisochromane. The dichloride I reacted with aniline, 4-chloroaniline and 2,4-dichloroaniline in benzene solution gives quantitative yields of respective dianilides.

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USSR

UDC 547.539.131

KONDRATENKO, N. V., SYROVA, G. P., POPOV, V. I., SHEYNKER, Yu. N., and YAGUPOL'SKIY, L. M., Institute of Organic Chemistry, Academy of Sciences, Ukrainian SSR

"Aryltrihalosilanes and Germanes. σ Constants of Trihalosilyl and -Germyl Groups

Leningrad, Zhurnal Obshchey Khimii, Sep 71, Vol 41, No 9, pp 2056-2060

Abstract: The synthesis of fluorobenzene derivatives with $SiHlg_3$ and $GeHlg_3$ substituents where Hlg=F, Cl and Br is described and the σ constants of these groups determined. It was found that the induction effect increases in the series of substituents $CHlg_3<SiHlg_3<GeHlg_3$ with an increase in the electron donor capacity of the central atom to the halide atoms. The $SiHlg_3$ and $GeHlg_3$ hardly differ with respect to the conjugation effect, but they both excel the acceptor effect of the corresponding $CHlg_3$ groups. The regularities in changes in the σ_c constant value are attributed to the participation of silicon and germanium atoms in d_π-P_π conjugation. The yields, physical constants and analytical results of the obtained compounds are presented in a table.

1/1

UDC 547.539.2

USSR

YAGUPOL'SLIY, L. M., MIKHAYLOV, V. S., and MATYUSHECHEVA, G. I., Institute of Organic Chemistry, Kiev, Academy of Sciences Ukrainian SSR

"Investigation of the Reaction Between Carboxylic Acid Hydrazides and Phosphorus Pentachloride"

Leningrad, Zhurnal Organicheskoy Khimii, Vol 6, No 8, Aug 70, pp 1648-1651

Abstract: Benzoic acid hydrazide is interacted with phsophorus pentachloride to give a mixture of benzal chloride and benzotrichloride. Electron donor substituents in the para-position promote the formation of benzal chloride derivatives, while electron acceptor substituents increase the concentration of benzotrichloride derivatives. Substituents in the meta-position have almost no effect on the ratio of dichloromethyl and trichloromethyl compounds in the mixture of reaction products. When substituents are present in the ortho-position, it is the size of the substituent rather than its nature which has a decisive significance. Interaction of ortho-substituted benzoic acid hydrazides with phosphorus pentachloride in polar solvents leads to synthesis of practically pure benzal chloride derivatives.

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1/2 029 UNCLASSIFIED PROCESSING DATE--13NOV70
TITLE--CHEMICAL STRUCTURE OF ALPHA,BETA,DIFLUOROSTILBENES -U-

AUTHOR-(03)-YEGOROV, YU.P., KHRANOVSKIY, V.A., YAGUPOLSKIY, L.N.

COUNTRY OF INFO--USSR

SOURCE--TEOR. EKSP. KHIM. 1970, 6(1), 90-4

DATE PUBLISHED-------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--FLUORINATED ORGANIC COMPOUND, STILBENE, CONJUGATE BOND SYSTEM, MOLECULAR STRUCTURE, BENZENE DERIVATIVE, UV SPECTRUM, IR SPECTRUM, RAMAN SPECTRUM, CYCLIC GROUP

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--3002/1070 STEP NO--UR/0379/70/006/001/0090/0094

CIRC ACCESSION NO--AP0128497

UNCLASSIFIED

2/2 029 UNCLASSIFIED PROCESSING DATE--13NOV70
CIRC ACCESSION NO--AP0128497
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. UV, IR, AND RAMAN SPECTRA OF ALPHA,BETA,DIFLUOROSTILBENE (I) AND ITS 4,4',DI,ME DERIV. (II) ARE COMPARED TO THOSE OF 1,2,DIPHENYLETHYLENE. FLUORO SUBSTITUTION CAUSES A SUPERIOR CONJUGATION ON THE CENTRAL DOUBLE BOND, BUT WEAKENS THE EXOCYCLIC C-C BONDS. WITH BOTH I AND II, TRANS CONFIGURATIONS AND TWISTED PHENYL GROUPS (BY 25DEGREES FROM THE MOL. PLANE) WERE FOUND.
FACILITY: INST. ORG. KHIM., KIEV, USSR.

UNCLASSIFIED

1/2 017 UNCLASSIFIED PROCESSING DATE--090CT70

TITLE--AROMATIC COMPOUNDS WITH FLUORINE CONTAINING SUBSTITUENTS -U-

AUTHOR--YAGUPOLSKIY, L.M.

COUNTRY OF INFO--USSR

SOURCE--ZH. VSES. KHIM. OBSHCHEST., 1970, 15(1) 64-72

DATE PUBLISHED--------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--FLUORINATED ORGANIC COMPOUND, ETHER, SULFIDE, SELENIUM COMPOUND, AMINE, PHOSPHORUS COMPOUND, ARSENIC COMPOUND

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1992/1578 STEP NO--UR/0063/70/015/001/0064/0072

CIRC ACCESSION NO--AP0112572

UNCLASSIFIED

2/2 017 UNCLASSIFIED PROCESSING DATE--09OCT70

CIRC ACCESSION NO--AP0112572

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. A REVIEW THROUGH 1968 OF DERIVS. OF PHCF SUB3, ETHERS, SULFIDES, AND SELENIDES WITH FLUOROALKYL GROUPS, AMINES, PHOSPHINES, AND ARSINES WITH CF SUB3 GROUPS, AND AROM. COMPDS. IN WHICH F ATOMS ARE BOUND TO THE HETEROATOMS, WITH 86 REFS.

UNCLASSIFIED 89

1/2 015 UNCLASSIFIED PROCESSING DATE--02OCT70

TITLE--BIS AND TRIS(DIFLUOROMETHYLTHIO AND SULFONYL)ARENES AND ARYL DIFLUOROMETHYL ETHERS -U-

AUTHOR-(04)-SEDOVA, L.N., GANDELSMAN, L.Z., ALEKSEYEVA, L.A., YAGUPOLSKIY, L.M.

COUNTRY OF INFO--USSR

SOURCE--ZH. ORG. KHIM. 1970, 6(3) 568-73

DATE PUBLISHED-------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--FLUORINATED ORGANIC COMPOUND, SULFONE, ARYL ETHER, CHEMICAL REDUCTION, HYDRIAZINE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1992/1531 STEP NO--UR/0366/70/006/003/0568/0573

CIRC ACCESSION NO--AP0112525

UNCLASSIFIED

2/2 015 UNCLASSIFIED PROCESSING DATE--02OCT70

CIRC ACCESSION NO--AP0112525

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. REDN. OF XC SUB6 H SUB3 (SO SUB2 CL) SUB2-2,4 WITH ZN AMALGAM GAVE XC SUB6 H SUB3 (SH) SUB2-2,4 (I) (X IS H, NE, OR CL). THE ACTION OF CHCLF SUB2 ON I IN NAOH SOLN. GAVE XC SUB6 H SUB3 (SCHF SUB2) SUB2-2,4 WHICH WERE OXIDIZED WITH CRO SUB3-AC SUB2 O TO XC SUB6 H SUB3 (SO SUB2 CHF SUB2) SUB2-2,4. SIMILARLY, STARTING WITH XC SUB6 H SUB2 (SO SUB2 CL) SUB3-2,4,6, WERE PREPD. XC SUB6 H SUB2 (SO SUB2 CHF SUB2) SUB3 2, 4,5 (II) (X IS NH SUB2 OR CL). THE REACTION OF P-F SUB2 CHSC SUB6 H SUB4 NH SUB2 WITH NANO SUB2-HCL-SO SUB2 GAVE P-FE SUB2 CHSC SUB6 H SUB4 SO SUB2 CL, WHICH WAS CONVERTED INTO P-F SUB2 CHO SUB2 SC SUB6 H SUB4 SO SUB2 CHF SUB2 (III) AS ABOVE. PASSING CHCLF SUB2 THROUGH AN ALK. SOLN. OF P- OR O-HOC SUB6 H SUB4 OH CONTG. NA SUB2 S SUB2 O SUB4 ALSO GAVE III OR ITS O-ANALOG. THE REACTION OF MEONA WITH II (X EQUALS CL) GAVE A MIST. OF II (X EQUALS MEO) AND II (X EQUALS HO). THE REACTION OF N SUB2 H SUB4 WITH II (X EQUALS CL) GAVE II (X EQUALS H SUB2 NNH).

UNCLASSIFIED

1/2 016 UNCLASSIFIED PROCESSING DATE--23OCT70

TITLE--EFFECT OF TRIFLUOROMETHYLSELENO GROUPS ON THE COLOR OF AMINOAZO AND CYANINE DYES -U-

AUTHOR-(02)-YAGUPOLSKIY, L.M., VOLOSHCHUK, V.G.

COUNTRY OF INFO--USSR

SOURCE--UKR. KHIM. ZH. 1970, 36(1), 66-71

DATE PUBLISHED-------70

SUBJECT AREAS--CHEMISTRY, MATERIALS

TOPIC TAGS--FLUORINATED ORGANIC COMPOUND, DYE, AZO COMPOUND, ORGANOSELENIUM COMPOUND, THIAZOLE, MOLECULAR STRUCTURE, HETEROCYCLIC BASE COMPOUND

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1999/1807 STEP NO--UR/0073/70/036/001/0066/0071

CIRC ACCESSION NO--AP0123602

UNCLASSIFIED

2/3 016 UNCLASSIFIED

CIRC ACCESSION NO--AP0123602 PROCESSING DATE--23OCT70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. MICROFICHE OF ABSTRACT CONTAINS GRAPHIC INFORMATION. THE PREVIOUSLY ESTABLISHED RELATION FOR THE CHANGE IN LAMBDA FOR RHO,XC SUB6 H SUB4 N:NC SUB6 H SUB4 NME SUB2 (I) BETWEEN ETOH AND 2:1 ETOH,HCL OR ETOH,H SUB2 SO SUB4 MIXTS. AND MAX. SIGMA SUBP, 0.01 DELTALAMBDA EQUALS 1.25 MINUS 1.01 SIGMA SUBP (YA., ET AL., 1965) GIVES THE FOLLOWING VALUES OF SIGMA SUBP WHICH ARE IN GOOD AGREEMENT WITH THOSE OBTAINED USING THE PK SUBA OF BENZOIC ACIDS: H, 0.00; F SUB3 CO, 0.32; F SUB3 CS, 0.43; F SUB3 CSE, 0.38; F SUB3 CSO, 0.67; F SUB3 CSEO, 0.63. I (X EQUALS F SUB3 CSE) M. 164-5DEGREES (C SUB6 H SUB6), LAMBDA SUBMAX 447 NM (ETOH), 505 NM (2:1 ETOH,HCL). I (X EQUALS F SUB3 CSEO) M. 194-5DEGREES (C SUB6 H SUB6), LAMBDA SUBMAX 448 NM (ETOH), 510 NM (2:1 ETOH,H SUB2 SO SUB4). ATTEMPTS TO COMPLETE THE SERIES WITH THE F SUB3 CSO SUB2 COMPD. WERE UNSUCCESSFUL. RHO,RO SUB2 CNHC SUB6 H SUB4 SEO SUB2 CF SUB3 (II, R EQUALS ET), M. 154-5DEGREES (ETOH), AND II (R EQUALS PHCH SUB2), M. 152-3DEGREES, PREPD. BY OXIDN. OF RHO,RO SUB2 CNHC SUB6 H SUB4 SECF SUB3, M. 91-2DEGREES (C SUB6 H SUB6) AND 110-11DEGREES (C SUB6 H SUB6), RESP., BOTH LOST THE CF SUB3 SEO SUB2 GROUP ON HYDROLYSIS, BOTH IN ACID AND IN BASIC SOLN. BECAUSE OF THE POWERFUL OXIDATIVE ACTION OF THE CF SUB3 SEO SUB2 GROUPS, PHSEO SUB2 CF SUB3 (III) REACTED WITH BOTH HCL AND PCL SUB5 TO FORM PHSECL SUB2 CF SUB3, M. 66DEGREES (LIGROINE). IN 10PERCENT NA SUB2 CO SUB3 AT ROOM TEMP. III FORMED PHSEO SUB3 H, ISOLATED AS THE RHO,MEC SUB6 H SUB4 NH SUB2 SALT, M. 173DEGREES.

UNCLASSIFIED

3/3 016 UNCLASSIFIED PROCESSING DATE--23OCT70

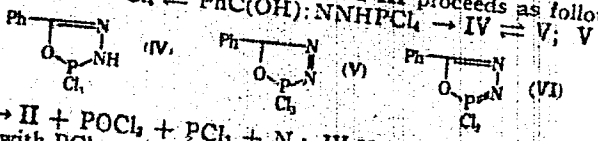
CIRC ACCESSION NO--AP0123602

ABSTRACT/EXTRACT--STARTING FROM RHO,ACNHC SUB6 H SUB4 SECF SUB3, RHO,MECSNHC SUB6 H SUB4 SECF SUB3, M. 111-12DEGREES (LIGROINE), 2,METHYL,6,(TRIFLUOROMETHYLSELENO)BENZOTHIAZOLE, M. 73-5DEGREES (C SUB6 H SUB6,LIGROINE) (ETI SALT M. 175-6DEGREES), WERE PREPD. BY STANDARD METHODS. F SUB3 CSECL AND OMICRON,ACNHC SUB6 H SUB4 NH SUB2 IN ET SUB2 O GAVE 5,2,F SUB3 CSE(H SUB2 N)C SUB6 H SUB3 NHAC, M. 191DEGREES (AQ. ETOH). FROM THESE COMPDS. THE SE CONTG. DYES IV-IX (R EQUALS F SUB3 CSE) WERE PREPD. BY STANDARD METHODS. THERE IS NO GREAT DIFFERENCE BETWEEN THE EFFECT ON THE ABSORPTION OF CYANINE DYES PRODUCED BY THE F SUB3 CS AND BY THE F SUB3 CSE GROUPS. PROPERTIES OF THE SE CONTG. DYES WERE COMPARED WITH THOSE OF THEIR ANALOGS (TYPE, LAMBDA SUBMAX (NM) FOR R EQUALS H, F SUB3 CO, F SUB3 CS, AND F SUB3 CSE, AND M.P. FOR R EQUALS F SUB3 CSE COMPD. GIVEN): IV, 558, 560, 568, 570, 274-6DEGREES; V, 544, 545, 555, 555, 174-6DEGREES; VI, 523, MINUS, 518, 522, 294-6DEGREES; VII, 530, 540, 549, 549, 260-2DEGREES; VIII, 498, 502, 510, 510, 208-10DEGREES; IX, 515, 518, 520, 520, 211-12DEGREES. ATTEMPTS TO NITRATE F SUB3 CSEPH PRODUCED M,O SUB2 NC SUB6 H SUB4 SEOCF SUB3, M. 141DEGREES; HYDROLYSIS GAVE M,O SUB2 NC SUB6 H SUB4 SEO SUB2 H, M. 155-6DEGREES (H SUB2 O). FACILITY: INST. ORG. KHIM., KIEV, USSR.

UNCLASSIFIED

Acc. Nr AP0048821 · Abstracting Service: CHEMICAL ABST. 4/70 Ref. Code: UR0346

90373n Reaction of hydrazides of carboxylic acids with phosphorus pentachloride. I. Solvent effects. Mikhailov, V. S.; Matyushecheva, G. I.; Derkach, G. I.; Yagupol'skii, L. M. (Inst. Org. Khim., Kiev, USSR). *Zh. Org. Khim.* 1970, 6(1), 149–51 (Russ). Heating $BzNHNH_2$ (I) with PCl_5 at 80–120° in CCl_4, C_6H_6, PhCl, $POCl_3$, $MeNO_2$, p-$O_2NC_6H_4Cl$, or tetrahydrothiophene 1,1-dioxide gave mixts. of $PhCHCl_2$ (II) and $PhCCl_3$ (III). The proportion of III in the mixt. increased with the temp. and the amt. of PCl_5. In polar solvents more II than III was formed. The formation of II and III proceeds as follows: I → $BzNHNHPCl_4$ ⇌ $PhC(OH):NNHPCl_4$ → IV ⇌ V; V + PCl_5 → II + $POCl_3$ + PCl_3 + N_2; IV.HCl → stable VI, which reacts with PCl_5 to give III, $POCl_3$, PCl_3, and N_2. Only the end products (II and III) of the above sequence were identified.



(IV) (V) (VI)

CPJR

REEL/FRAME
19800584

Acc. Nr. AP0053626 Abstracting Service: CHEMICAL ABST. Ref. Code UR0366

110915w Difluoroiodine derivatives of organic compounds. Lyalin, V. V.; Orda, V. V.; Alekseeva, L. A.; Yagupol'skii, L. M. (Inst. Org. Khim., Kiev, USSR). *Zh. Org. Khim.* 1970, 6(2), 329–32 (Russ). The reaction of $RI{:}O$ or $RI(O_2CCF_3)_2$ (R is Ph, *p*-MeC_6H_4, *o*-$O_2NC_6H_4$, *m*-FC_6H_4, *p*-FC_6H_4, β-pyridyl, C_6F_5, or F_3CCF_2) with SF_4 in CH_2Cl_2 at −20° gave 59–100% RIF_2.

CPJR

REEL/FRAME
19830681

USSR

UDC: 547.539.2

MIKHAYLOV, V. S., MATYUSHECHEVA, G. I., DERKACH, G. I. (DECEASED), and YAGUPOL'SKIY, L. M., Institute of Organic Chemistry, Academy of Sciences Ukrainian SSR

" A Study of the Reactions Between Carboxlynic Acids and Phosphorus Pentachloride, 1. The Effect of Solvents"

Leningrad, Zhurnal Organicheskoy Khimii, Akademiya Nauk SSSR, Vol VI, No 1, Jan 70, pp 149 - 151

Abstract: The hydrazides of certain aromatic carboxylic acids react with phosphorus pentachloride to form benzal chloride and benzotrichloride.

Experiments run by the authors indicate that the particular solvent used (benzene, CCl_4, chlorobenzene, etc.) has a marked influence on the relative proportion of the two products indicated. In general, use of polar solvents increases the content of benzal chloride.

A table, and also structural formulation of the reactions, accompany the paper.

1/1

Acc. Nr: AP0053459 Abstracting Service: CHEMICAL ABST. 5170 Ref. Code: UP0366

110708f Unsaturated sulfones containing fluorine. VIII. Polyfluoroalkyl vinyl sulfones. Aleksandrov, A. M.; Yagupol'skii, L. M. (Inst. Org. Khim., Kiev, USSR). *Zh. Org. Khim.* 1970, 6(2), 249–54 (Russ). Irradn. of $CF_2SCl–H_2C:CHCl$ gave 2 isomers $CF_2SCH_2CHCl_2$ (I) and $CF_2SCHClCH_2Cl$, sepd. by gas chromatog. Oxidn. of I with H_2O_2 gave only $CF_2SO_2CH_2CHCl_2$, but with $KMnO_4$ $CF_2SO_2CH_2CHCl_2$ (II) was obtained. Dehydrochlorination of II with NEt_3 gave $CF_2SO_2CH:CHCl$ which is a powerful alkylating agent and it reacted with piperidine, 4-ClC_6H_4SH (in the presence of NEt_3), or Na_2S to give, resp., 1-trifluoromethylsulfonyl-2-piperidinoethylene, $CF_2SO_2CH:CHSC_6H_4Cl$-4, or $(CF_2SO_2CH:CH)_2S$ (III). Oxidn. of III with CF_2CO_2OH gave $(CF_2SO_2CH:CH)_2SO_2$. Heating a mixt. of $CF_2ClCFClSCl$ with $H_2C:CH_2$ at 100° in an autoclave gave $CF_2ClCFClSCH_2CH_2Cl$, which was oxidized with CrO_3 to $CF_2ClCFClSO_2CH_2CH_2Cl$ (IV). Dehydrochlorination of IV with NEt_3 gave $CF_2ClCFClSO_2CH:CH_2$, which is also an alkylating agent; it reacted with chlorides to give $CF_2ClCFClSO_2CH_2CH_2NHC_6H_4Cl$-4 and $CF_2ClCFClSO_2CH_2CH_2SC_6H_4Cl$-4, which was oxidized to $CF_2ClCFClSO_2CH_2CH_2SO_2C_6H_4Cl$-4. CPJR

REEL/FRAME
19830484

Acc. Nr: AP0053449 Abstracting Service: CHEMICAL ABST. 5/70 Ref. Code: UR0366

111347z Reaction of [benzothiazolyl substituted] polyfluorinated olefins with ammonia. Malichenko, N. A.; Vagupol'skii, L. M.; Kulik, V. F. (Inst. Org. Khim., Kiev, USSR). *Zh. Org. Khim.* 1970, 6(2), 389–94 (Russ). The reaction of $RCF_2CF_2CF:CF_2$ (R in this abstr. is benzothiazolyl) with aq. NH_3 solns. at 20° gave $RCF_2C(NH_2):CFCN$ (I). The reaction proceeds through $RCF_2CF:CFCN$ as the intermediate (not isolated). $RCF_2CF:CF_2$ reacts with aq. NH_3 at 20° to give RCF:CFCN (II), which on heating to 60° in aq. NH_3 gives $RC(NH_2):CFCN$ (III). The possibility of I rearrangement to $RCF:CFCF_2NH_2$ (IV) and its conversion, under the above conditions, to RCF:CFCF$_2$NH$_2$ → II → III was eliminated by reacting IV with aq. NH_3 at 60° which gave $RC(:NH)CHFCF_2$. The presence of R in the above compds. accelerates the reaction. $H(CF_2)_4CF:CF_2$ requires reflux temps. with NH_3 to give $H(CF_2)_3C(NH_2):CFCN$ (V). Heating I, II, or V with aq. acid solns. gave RCF_2COCH_2F, $RCOCH_2F$, or $H(CF_2)_3COCH_2F$.

CPJR

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REEL/FRAME
19830474

7

Acc. Nr. AP0041689 Abstracting Service: CHEMICAL ABST. 4/70 Ref. Code UR0366

89975d Fluorination of aromatic polycarboxylic acids by sulfur tetrafluoride. III. Fluorination of benzenetetracarboxylic acids. Burmakov, A. I.; Alekseeva, L. A.; Yampol'skii, L. M. (Inst. Org. Khim., Kiev, USSR). *Zh. Org. Khim.* 1970, 6(1), 144–8 (Russ). Heating $HO_2CC_6H_2(CO_2H)_3$-2,3,5 with SF_4 in an autoclave ≤200° gave 2,4,6-$(F_3C)_2C_6H_2COF$ (I). However, the fluorination of $HO_2CC_6H_2(CO_2H)_3$-2,3,4 gave 4,7-bis(trifluoromethyl)-1,1,3,3-tetrafluorophthalan (II). The structure of I was proven by its stepwise conversion to 2,4,6-$(F_3C)_2C_6H_2CONH_2$ (III), 2,4,6-$(F_3C)_3C_6H_2NH_2$ (IV), 3,5-$(F_3C)_2C_6H_3CF_3$, and HO_2C-$C_6H_3(CO_2H)_2$-3,5. Heating III with P_2O_5 gave 2,4,6-$(CF_3)_3$-C_6H_2CN. The diazotization of IV followed by coupling with 3-$MeC_6H_4N(CH_2CH_2OH)_2$ gave 2,4-Me[$(HOCH_2CH_2)_2N$]-$C_6H_2N{:}NC_6H_2(CF_3)_3$-1,3,5. The structure of II was proved by its hydrolysis to 2,3,6-$HO_2C(F_3C)_2C_6H_2CO_2H$, which was converted to 4,7-bis(trifluoromethyl)phthalide (V). The treatment of V with PCl_5 gave 4,7-bis(trifluoromethyl)-1,1,3,3-tetrachlorophthalan, which reacted with SbF_3 to give II. CPJR

REEL/FRAME
19751566

Acc. Nr. AP0041852 Abstracting Service: CHEMICAL ABST. 4173 Ref. Code UR0366

89921h Benzal iodide. Feshchenko, N. G.; Kondratenko, N. V.; Yagupol'skii, L. M.; Kirsanov, A. V. (Inst. Org. Khim., Kiev, USSR). *Zh. Org. Khim.* 1970, 6(1), 191 (Russ). Refluxing a mixt. of PhCHO and P_2I_4 in C_6H_6 gave $PhCHI_2$. Similarly, 3-$FC_6H_4CHI_2$ and 4-$FC_6H_4CHI_2$ were prepd. The compds. decomp. rapidly in storage. Heating $PhCHI_2$ with 4-$O_2NC_6H_4NHNH_2$ gave $PhCH{:}NNC_6H_4NO_2$-4. CPJR

REEL/FRAME
19751733

USSR

UDC 612:576.2

FUAD, KH. M., and YAGUZHINSKIY, L. S.

"Analysis of the Inhibitory Action of N,N-di-(2-ethyl chloride)-R-amino-phenylacetic Acid and Cinnamic Acid on Phosphorylating Mitochondria"

Moscow, Biologicheskiye Nauki, No 10, 1971, pp 44-47

Abstract: Tests performed on rat liver mitochondria revealed that the alkylating agent N,N-di(2-ethyl chloride)-R-aminophenylacetic acid and cinnamic acid are inhibitors, since they both suppress the respiration and the ATPase activity of mitochondria. However, each acts at a different point of the mitochondrial enzyme system. It is therefore inferred that the mechanism coupling respiration with phosphorylation is regulated by two different enzymes, each of which is indispensable for the normal functioning of the electron transfer chain and of ATP synthesis.

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USSR UDC 547.962

CHUMAKOV, V. M., IVANOV, V. P., YAGUZHINSKIY, L. S., ROZANTSEV, E. G., and KALMANSON, A. E., Institute of Virology imeni D. I. Ivanovskiy, Academy of Medical Sciences USSR; Institute of Chemical Physics, Academy of Sciences USSR; and Interfaculty Laboratory of Bioorganic Chemistry, Moscow State University imeni M. V. Lomonosov, Moscow

"An Investigation of Various Iminoxyl Free Radicals in Biological and Artificial Membranes by the Method of Erythrocyte Sedimentation Rate"

Moscow, Molekulyarnaya Biologiya, Vol 6, No 2, Mar/Apr 72, pp 240-245

Abstract: The structure and function of lecithin micelles and mitochondrial membranes were investigated by studying their interaction with iminoxyl spin labels or free radicals I-V. The ESR / erythrocyte sedimentation rate/ spectra obtained from various types of solutions containing the radicals and the substances being studied were examined. It was discovered that the ESR spectrum of the interaction of radical I with lecithin micelles and mitochondria had both a broad and a narrow signal, indicating that the radical was localized in two different parts of the membranes (the hydrophilic and hydrophobic parts). The same type of spectrum was observed for radical IV, but radicals III and V were localized only in the hydrophilic region of 1/2

CHUMAKOV, V. N., et al., Molekulyarnaya Biologiya, Vol 6, No 2, Mar/Apr 72, pp 240-245

the membranes. All five iminoxyls interacted with the respiratory chain of the mitochondria, resulting in iminoxyl decay, the rate of which was significantly lower in the hydrophobic region. Radical I was used to show that when the mitochondria are energized, the spin labels are transferred from the hydrophobic region to the hydrophilic. Radical I was also used to show that the changes which occur in the lipid part of the mitochondria during energization are qualitatively different from those which occur during reduction of the respiratory chain.

2/2

USSR

UDC: 621.396.69:621.372.54(088.8)

KALYAYEVA, A. N., PLETNEV, D. V., YAKHIMOVICH, I. Z.

"A High-Frequency Electromechanical Chain Filter"

USSR Author's Certificate No 255424, Filed 20 Jun 68, Published 9 Mar 70 (from RZh-Radiotekhnika, No 10, Oct 70, Abstract No 10V387 P)

Translation: The proposed high-frequency electromechanical chain filter is made in the form of hollow cylindrical resonators which vibrate in the torsional mode and are interconnected by wire restraints. As a distinguishing feature of the patent, the overall dimensions of the filter are reduced by making one or more resonators with a longitudinal slot and a radial slot in the central section of the resonator.

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USSR

UDC 621.396.664

YAKHINS, A. L., Ryazan'

"Adaptive Method of Automatic Control of Radio Receiver Sensitivity"

Moscow, Avtomatika i Telemekhanika, No 12, 1971, pp 176-178

Abstract: A study was made of automatic sensitivity control using the adaptive approach. The control algorithms and experimental results are presented, and methods of accelerating control are discussed.

For purposes of the theoretical investigation, the problem of controlling the sensitivity of a radio receiver is reduced to finding the power $\hat{w}$ for which the following condition is satisfied:

$$M\{K(w,x)\} - K_r = M\{\Delta(w, x)\} = 0$$

where $\hat{w}$ is the minimum level of the input power, $\Delta(w, x)$ is the deviation of the current value of the sensitivity criterion K from its rated value K_r as a function of the input power level, the receiver noise and the control criterion error. Results of simulating the process of sensitive control by the adaptive method are presented for $N\sigma = 0$ and for $N\sigma = 1\sigma$ (where $N\sigma$ is the mean value of the deviation of the current value of the sensitivity criterion from its rated value).

1/1

USSR

UDC 666.113.23-31:546.212:535.34

TATARINTSEV, B. V., and YAKHKIND, A. K., Candidate of Sciences

"The Effect of Water on the Infrared Transmission of High-Refractive Tellurite Glasses and a Method of Its Qualitative Determination"

Leningrad, Optiko-Mekhanicheskaya Promyshlennost', No 10, Oct 72, pp 72-73

Abstract: A systematic investigation was made of infrared transmission spectra of tellurite glasses with 20 mol% WO_3 and 20 mol% Na_2O, in order to determine their water absorption characteristics. The results of the qualitative determination of water are analyzed by reference to curves of infrared transmission spectra and characteristics of water absorption bands. The intensities of the bands and the meanings of their maxima are discussed. Two absorption maxima in the region of valence oscillations indicate the presence of two types of hydroxides with medium (3000 cm^{-1}) and strong (2200 cm^{-1}) hydrogen bands. The results are compared with differential spectra of practically waterless glasses of similar composition and thickness. One illustr., one table, three biblio. refs.

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1/2 011 UNCLASSIFIED PROCESSING DATE--30OCT70

TITLE--COMPLEXING IN LEAD IODIDE SODIUM IODIDE WATER AND MERCURY II IODIDE MERCURY II NITRATE WATER SYSTEMS STUDIED BY A SOLUBILITY METHOD -U-

AUTHOR-(02)-GYUNNER, E.A., YAKHKIND, N.D.

COUNTRY OF INFO--USSR

SOURCE--UKR. KHIM. ZH. 1970, 36(2), 147-50

DATE PUBLISHED--------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--NITRATE, IODIDE, WATER, MERCURY, SOLUBILITY, SODIUM COMPOUND, COMPLEX COMPOUND

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1996/1934 STEP NO--UR/0073/70/036/002/0147/0150

CIRC ACCESSION NO--AP0118896

UNCLASSIFIED

2/2 011 UNCLASSIFIED PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0118896

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE SOLY. OF PBI SUB2 IN NAI SOLNS. OF VARIOUS CONCN. AT IONIC STRENGTH (NANO SUB3) 3.9 AND 20DEGREES AND THE SOLY. OF HGI SUB2 IN HG(NO SUB3) SUB2 SOLNS. AT IONIC STRENGTH 5.2 AND THE SAME TEMP. WERE DETD. THE COMPLEXES FORMED WERE PB SUB4 I SUB12 PRIME4 NEGATIVE, HG SUB2 I SUB2 PRIME2 POSITIVE AND HG SUB3 I SUB2 PRIME4 POSITIVE WITH INSTABILITY CONSTS. OF 1.1 TIMES 10 PRIME NEGATIVE29, 1.0 TIMES 10 PRIME NEGATIVE28, AND 5.1 TIMES 10 PRIME NEGATIVE28, RESP. THE EQUIL. CONSTS. FOR THE SOLN. OF HGI SUB2 IN HG PRIME2 POSITIVE SOLNS. ARE 9.83 TIMES 10 PRIME NEGATIVE2 AND 1.97 TIMES 10 PRIME NEGATIVE2, RESP. FACILITY: KRYM. PEDAGOG. INST. IM. FRUNZE, SIMFEROPOL, USSR.

UNCLASSIFIED

1/3 034 UNCLASSIFIED PROCESSING DATE--20NOV70
TITLE--WORK EXPENDITURES OF ROENTGENOLOGISTS ON SOME EXAMINATIONS -U-

AUTHOR-(03)-YAKHNICH, I.M., GENKIN, A.G., POLYANSKAYA, Z.M.

COUNTRY OF INFO--USSR

SOURCE--MOSCOW, SOVETSKOYE ZDRAVOOKHRANENIYE, RUSSIAN, NO 2, 1970,
SUBMITTED 25 JULY 1969, PP 31-35
DATE PUBLISHED--------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--RADIOLOGY, INDUSTRIAL HYGIENE, MEDICAL EXAMINATION, X RAY EQUIPMENT, DIAGNOSTIC METHODS, DIGESTIVE SYSTEM, RADIATION PROTECTION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--3005/0699 STEP NO--UR/0753/70/000/002/0031/0035

CIRC ACCESSION NO--AP0132809

UNCLASSIFIED

2/3 034 UNCLASSIFIED PROCESSING DATE--20NOV70

CIRC ACCESSION NO--AP0132809

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. DURING RECENT YEARS THERE HAS BEEN A CONSIDERABLE CHANGE IN THE VOLUME AND NATURE OF WORK IN X RAY DIAGNOSTIC DIVISIONS AND OFFICES. MANY NEW RESEARCH METHODS HAVE BEEN INTRODUCED AND THERE IS EXTENSIVE USE OF SUCH SPECIAL INVESTIGATIONS AS BRONCHO, TOMO, ANGIOPULMON, ANGIOCARDIO AND ELECTROKYMOGRAPHY AND MANY OTHER TECHNIQUES AND NEW EQUIPMENT IS BEING USED. AT THE SAME TIME, THE SUPPLY OF PROTECTIVE EQUIPMENT FOR THERAPEUTIC INSTITUTIONS HAS IMPROVED. THE INCREASE IN VOLUME AND COMPLICATION OF THE WORK OF X RAY OFFICES ARE REFLECTED TO A CONSIDERABLE DEGREE IN THE NATURE OF THE WORK DONE BY THEIR SPECIALISTS. THESE FACTORS ALSO EXERT A CONSIDERABLE EFFECT ON THE WORK EXPENDITURES OF MEDICAL PERSONNEL. IT CAN THEREFORE BE CONCLUDED THAT TIME SPENT ON ROENTGENOSCOPIC EXAMINATION OF ORGANS OF THE CHEST CAVITY AND DIGESTIVE TRACT DURING OPERATION OF THE X RAY TUBE AND ON THE EXAMINATION AS A WHOLE DIFFERS AT INSTITUTIONS OF DIFFERENT TYPES. ACCORDINGLY, EXISTING WORK LOAD STANDARDS FOR ROENTGENOLOGISTS REQUIRE REVISION. IN FORMULATING DIFFERENTIAL WORK LOAD STANDARDS FOR IMPORTANT TYPES OF EXAMINATIONS IT IS NECESSARY TO TAKE INTO ACCOUNT THE TYPE OF INSTITUTION WHERE THEY ARE MADE, THE SPECIFIC TYPE OF EXAMINATION AND THE GROUP OF EXAMINED PATIENTS. THE FORMULATION AND ADOPTION OF DIFFERENTIATED WORK LOAD STANDARDS FOR ROENTGENOLOGISTS WILL FURTHER IMPROVE THE X RAY DIAGNOSTIC SERVICE. FACILITY: ALL UNION SCIENTIFIC RESEARCH INSTITUTE OF SOCIAL HYGIENE AND ORGANIZATION OF PUBLIC HEALTH SERVICES IMENI N. A. SEMASHKO, MOSCOW.

FACILITY: MOSCOW SCIENTIFIC RESEARCH X RAY RADIOLOGICAL INSTITUTE.

UNCLASSIFIED

3/3 034 UNCLASSIFIED PROCESSING DATE--20NOV70
CIRC ACCESSION NO--AP0132809
ABSTRACT/EXTRACT--FACILITY: HEALTH MINISTRY RUSSIAN SOVIET FEDERATIVE SOCIALIST REPUBLIC.

UNCLASSIFIED

USSR

UDC 576.8.095.383

ZVYAGINTSEV, D. G., PERTSOVSKAYA, A. F., YAKHNIN, YE. D., and AVERBAKH, E. I., Chair of Soil Biology, Biology and Soil Facility, Moscow State University imeni M. V. Lomonosov, Moscow, and Institute of Physical Chemistry, Academy of Sciences USSR

"Determination of the Degree of Adhesion of Cells of Microorganisms to Solid Surfaces"

Moscow, Mikrobiologiya, Vol 40, No 6, Nov/Dec 71, pp 1024-1028

Abstract: The force with which cells of 11 strains of microorganisms of 9 species adhered to the surface of a glass plate upon adsorption was determined on a centrifuge equipped with a special rotor. The number N_o of cells adsorbed on the galss surface from suspensions of equal concentration before the force detaching them was applied decreased in the order Staphylococcus aureus 120 > Bacterium fimbriatum > Bacillus mesentericus 112 > Ser. marcescens 71 > Ser. marcescens 103 > Bac. mesentericus 53 > Pseudomonas fluorescens > Ps. pyocyanea Bac. cereus 116 > Bac. subtilis 27 > Saccharomyces cerevisiae. The value of $\gamma_F = N.100/N_o$, where N is the number of cells that remained on the surface after rotation at 16,000 rpm (7,800 rpm for Sacch. cerevisiae), decreased in the order Ser. marcescens 71 > Staph. aureus 120 > Ser. marcescens 103 > Sacch. cerevisiae 1/2/

USSR

ZVYAGINTSEV, D. G., et al., Mikrobiologiya, Vol 40, No 6, Nov/Dec 71, pp 1024-1028

bac. cereus 116 > Ps. pyocyanea > Bac. mesentericus 53 > Bact. fimbriatum > Ps. fluorescens > Bac. mesentericus 112 > Bac. subtilis 27. The force F_{50} at which 50% of the cells adhering to the glass became detached was within the range of 4×10^{-7} - 4×10^{-4} dyne/cell for the microorganisms studied. γ_F decreased with increasing age of the cultures. It was typical for some strains (principally those of species of the genus Bacillus) that the number of cells which adhered to the surface was small, while F_{50} was large (0.6×10^{-5} dyne/cell). For Ser. marcescens 71 and Staph. aureus 120, both the number of cells that adhered and the force of adhesion were large. Non-sporiferous bacteria (e.g., those of the genus Pseudomonas) adhered to the solid surface in large numbers, while F_{50} for them was small (0.4×10^{-6} - 0.6×10^{-6} dyne/Cell). Consideration of the values of P_a equal to the ratio of F_{50} to the volume of a cell indicated that the force of adhesion on the basis of P_a was highest for Ser. marcescens 71 and Staph. aureus 120, while it was much lower for the other strains. An electron-microscopic examination showed that the great strength of adhesion of Ser. marcescens 71 and Staph. aureus 120 was due to the presence of thin cell-wall protuberances that facilitated contact. 2/2

USSR

UDC 620.186:669.15'26-194:621.785.532

YAKHNINA, V. D., and TURKOVSKAYA, YE. P., Moscow Chemical Machine Building Institute

"Influence of Carbon on the Structure of the Nitrided Layer of Type-Kh13 Steels"

Moscow, Metallovedeniye i Termicheskaya Obrabotka Metallov, No 2, 1971, pp 26-28

Abstract: The nitrided layers of 0Kh13, 1Kh13, 3Kh13, and 4Kh13 steels were studied by methods of individual layer X-ray structural and metallographic analysis. The structure of the nitrided layer of stainless steels with 13% Cr and the process of its formation and layer hardness were found to depend on the carbon content in the steel as well as the nitriding mode. At 620 and 540°C, α-γ conversion may occur during nitriding, since the nitrogen reduces the austenitic conversion temperature. Various conversions may occur in the same layer due to the differences in nitrogen content with depth. Nitrided layers produced at 540°C on all steels studied had good hardness. The greater the content of carbon, the greater the portion of layer hardened as a result of separation of a Cr_2N solid phase. The hardness of layers produced at 620°C was influenced by the degree of dispersion of CrN nitride. The more carbon in the steel, the greater the coagulation of nitrides and the lower the hardness of the layer.

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USSR

UDC 535.373.1(083.76)

YAKHNIS, G. I., GOVOROVA, R. A., DOVGAN' M. YE., BATURICHEVA, Z. B.

"Some Questions of Scintillator Standardization"

Khar'kov, Monokristally, Stsintillyatory i Organicheskiye Lyuminofory -- Sbornik (Monocrystals, Scintillators, and Organic Luminophores -- Collection of Works), No 5, 1970, pp 302-306 (from Referativnyy Zhurnal, Metrologiya i Izmeritel'naya Tekhnika, No 12, 1970, Abstract No 12.32.1498)

Translation: In recent years, the area of the employment of scintillators has expanded considerably. Demands made upon them have also increased, particularly with regard to their capacity to operate under conditions of the action of various climatic and mechanical factors. Standardization of the products should begin with the development of basic rules which include a classification of the products according to the nature of their employment and according to the level of their operational characteristics; justified guarantee periods and a technical service life must be established. The present article sets forth the results of

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USSR

YAKHNIS, G. I., et al, Monokristally, Stsintillyatory i Organicheskiye Lyuminofory -- Sbornik, No 5, 1970, pp 302-306

research carried out in this direction. 1 figure, 1 table, 2 bibliographic entries.

2/2

1/2 013 UNCLASSIFIED PROCESSING DATE--04DEC70
TITLE--ELECTRICALLY CONDUCTING PRIMER -U-

AUTHOR--YAKHNO, A.G.

COUNTRY OF INFO--USSR

SOURCE--U.S.S.R. 265,342
REFERENCE--OTKRYTIYA, IZOBRET., PROM. OBRAZTSY, TOVARNYE ZNAKI 1970,
DATE PUBLISHED--09MAR70

SUBJECT AREAS--MATERIALS

TOPIC TAGS--ELECTRIC CONDUCTIVITY, POLYESTER RESIN, LACQUER, POLYVINYL ACETATE, PATENT

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--3007/1765 STEP NO--UR/0482/70/000/000/0000/0000

CIRC ACCESSION NO--AA0137005
UNCLASSIFIED

2/2 013 UNCLASSIFIED PROCESSING DATE--04DEC70

CIRC ACCESSION NO--AA0137005

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. AN ELEC. CONDUCTING PRIMER TO BE APPLIED UNDER A POLYESTER LACQUER CONTAINED PLASTICIZED POLY(VINYL ACETATE) EMULSION, DRYING OIL, WHITE SPIRIT, OP-10 SURFACTANT, AND 0.1N NAOH.

UNCLASSIFIED

USSR UDC 576.858.75

RYBINS'KA, L. M., and YAKHNO, M. A., Kiev Scientific Research Institute of Infectious Diseases, Kiev

"Antigenic Properties of Parainfluenza Viruses Isolated in Kiev"

Kiev, Mikrobiologicheskiy Zhurnal, Vol 33, No 4, Jul/Aug 71, pp 473-477

Abstract: The antigenic properties of 11 strains of parainfluenza viruses types I and II isolated in Kiev during 1964-1969 were studied by using the hemagglutination inhibition reaction with immune rabbit sera. Three strains of type I isolated in 1968-1969 and four strains of type II isolated in 1966-1967 differed antigenically from prototype viruses and from strains isolated in Kiev in preceding years. The results were confirmed by tests conducted with sera of the All Union Center of Influenza and Respiratory Diseases which had been obtained by intranasal immunization of rats and with standard equine sera of the World Health Organization. The work was conducted to establish possible antigenic differences from viruses isolated in America.

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USSR

UDC 616.8-009.836.12-092 "52"

YAKHNO, N. N., RAYT, M. L., BEYN, A. M., and LATASH, L. P., Laboratory of Problems of the Control of Functions in the Organism of Man and Animals imeni N. I. Grashchenkov, and Chair of Clinical Physiology, Central Scientific Research Laboratory of the First Moscow Medical Institute imeni I. M. Sechenov

"Diurnal Rhythm of Wakefulness and Sleep in Narcolepsy"

Moscow, Byulleten' Eksperimental'noy Biologii i Meditsiny, Vol 71, No 3, Mar 71, pp 20-23

Abstract: The diurnal rhythm of wakefulness and sleep was studied in one patient with monosymptomatic narcolepsy (attacks of sleep during daytime) and in two patients with polysymptomatic narcolepsy (sleep attacks, cataplexy phases, and hallucinations during night sleep). Electroencephalograms (frontal, parietal, and occipital areas), electromyograms (mouth musculature), and electrocardiograms were recorded while the patients were carefully observed over a 24-hour period. The total duration of the sleep phase was markedly prolonged in the patient with monosymptomatic narcolepsy as a result of the sleep seizures during the day. Stages of pronounced drowsiness were observed in the patients with polysymptomatic narcolepsy. All patients

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USSR

YAKHNO, N. N., et al., Byulleten' Eksperimental'noy Biologii i Meditsiny, Vol 71, No 3, Mar 71, pp 20-23

displayed a deficit of the various "slow" sleep phases and increased recurrence of "rapid" sleep phases in the first half of the day and of delta-sleep phases in the evening and at night. A premature onset and a greater phasic activity of "rapid" sleep was observed in patients with polysymptomatic narcolepsy.

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USSR

UDC: 532.516

AVERIN, V. Z., YAKHNO, O. M., GUZOV, M. Z.

"Motion of a Viscous Liquid in a Rotating Tube"

Gidravlika i gidrotekhnika. Resp. mezhved. nauch.-tekhn. sb. (Hydraulics and Hydraulic Engineering. Republic Interdepartmental Scientific and Technical Collection), 1972, vyp. 14, pp 20-24 (from RZh-Mekhanika, No 7, Jul 72, Abstract No 7B624)

Translation: The paper presents the results of an experimental study of the radial pressure gradient in a rotating tube. The experiments were done on a tube with a length of 66 diameters. Measurements of the radial and axial components of the pressure gradient were taken on a hydrodynamically stabilized section. The experiments were done over a Reynolds number range of 10^3-10^5. The peripheral velocity of the fluid at the wall of the tube varied from 10 to 200 $m \cdot s^{-1}$. Data are given on the pressure distribution along the radius of the tube for various angular velocities. Bibliography of 14 titles. V. D. Vilenskiy.

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USSR

YAKHNO, V. P.

"Some Model Representations of Processes of Perception of Time Sequences"

Aktual'n. Vopr. Tekhn. Kibernetiki [Pressing Problems of Engineering Cybernetics -- Collection of Works], Moscow, Nauka Press, 1972, pp 277-281 (Translated from Referativnyy Zhurnal, Kibernetika, No 3, Moscow, 1973, Abstract No 3 V723 by the author).

Translation: An analysis is presented of the psychophysiological data on perception of time intervals and rhythmic sequences of pulses. Possible mechanisms are studied for operation of the neuron structures which act in the perception of this type of signal.

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YAKHNO, V. P.

Neurology

SO: FOREIGN PRESS DIGEST GLOMIA
30 APRIL 71

30 Apr 71 126 FPD:CYBERNETICS

Neurology

140. USSR UDC 62-50

LYUBLINSKIY, I. A. and YAKHNO, V. P.

"Selection of the Parameters of a Multilayer Structure With Lateral Linkages, Taking Into Consideration the Instability of the Elements"

Sovremennyye Problemy Kibernetiki -- Sbornik (Modern Problems of Cybernetics -- Collection of Works), Moscow, "Nauka," 1970, pp 273-278

Abstract: The peaking of a signal is investigated in a multilayer structure consisting of neuron layers with lateral linkages and made up of unstable elements. The case of broad linkages is contrasted with conversion of a signal in layers with narrow linkages. It is demonstrated that the degree of peaking of an input signal in layers with broad linkages depends on the radius of action of the linkages, the law of change in a linkage as a result of distance, and the instability of the elements of the layer. For a given degree of instability, optimal values of the time lag (inertsionnost') for an individual element and the radius of action of the excited linkages, permitting maximum peaking, are determined.

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1/2 010 UNCLASSIFIED PROCESSING DATE--16OCT70

TITLE--AN ION EXCHANGE METHOD FOR ISOLATION OF CRYSTALLINE D CYCLOSERIN FROM FERMENTATION BROTH FILTRATES -U-

AUTHOR-(04)-YAKHONTIVA, L.F., BRUNS, B.P., KOBZITEVA, S.N., PEREVOZSKAYA, N.A.

COUNTRY OF INFO--USSR

SOURCE--ANTIBIOTIKI, 1970, VOL 15, NR 5, PP 411-415

DATE PUBLISHED-------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--ION EXCHANGE RESIN, FERMENTATION, CYCLOSERINE, CHEMICAL SEPARATION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1994/1140 STEP NO--UR/0297/70/015/005/0411/0415

CIRC ACCESSION NO--AP0115159

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203610015-1"

2/2 010 UNCLASSIFIED PROCESSING DATE--16OCT70

CIRC ACCESSION NO--AP0115159

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. AN ION EXCHANGE METHOD FOR ISOLATION OF CRYSTALLINE D CYCLOSERIN FROM FERMENTATION BROTH FILTRATES IS DESCRIBED. THE METHOD INCLUDES SORPTION OF CYCLOSERIN IN THE CATIONIC FORM BY A STRONG CROSS LINKED SULFOCATION EXCHANGE RESIN (ON THE BASIS OF STYRENE AND DIVINYLBENZOL) IN A SERIES OF COLUMNS. AN AQUEOUS AMMONIA SOLUTION IS USED FOR DESORPTION. CYCLOSERIN IN CRYSTALLIZED FROM ELUATES AFTER THEIR CLARIFICATION, EVAPORATION AND DILUTION OF THE CONCENTRATE WITH ETHYL ALCOHOL. A PRODUCT OF HIGH PURITY IS OBTAINED. FACILITY: NATIONAL INSTITUTE FOR ANTIBIOTICS, MOSCOW.

UNCLASSIFIED

USSR UDC 547.822.7.07

NIKITSKAYA, YE. S., ALEKSEYEVA, L. M., SHEYNKER, YU. N., and YAKHONTOV, L. N., All-Union Scientific Chemical-Pharmaceutical Research Institute imeni S. Ordzhonikidze, Moscow

"Synthesis of N'-Substituted 4-Aminopiperidines With a Shielded Nitrogen Atom"

Riga, Khimiya Geterotsiklicheskikh Soyedineniy, No 12, Dec 71, pp 1672-1678

Abstract: A detailed study was carried out of the triacetoneamine cyanohydrine (I) reaction with ammonia and various amines. It has been shown that (I) reacts with fatty and aromatic amines in methanol at 0-20°C yielding respective 2,2,6,6-tetramethyl-4-cyano-4-amino piperidines (II). Aromatic amines do not react under these conditions. The α-aminonitriles (II) are thermally unstable, and when heated above 50°, they split HCN, forming tetramethylpiperidines. Decyanation of (II) occurs also easily when these compounds are reduced with $LiAlH_4$, yielding pure N'-substituted-2,2,6,6-tetramethyl-4-aminopiperidines (III). Reacted with formic acid and formalin, (III) are easily methylated at the piperidine nitrogen atom. In cases where the exocyclic nitrogen atom happens to be a secondary amine, it also becomes methylated. The products -- N',N-disubstituted 1,2,2,6,6-pentamethyl-4-aminopiperidines are strong bases; they give stable dihydrochlorides.

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USSR

UDC 612.273.2+612.274

KURENKOV, G. I., and YAKHONTOV, R. O., Scientific Research Institute of Water Transport Hygiene, Ministry of Health USSR

"Oxygen Consumption During Strenuous Physical Exercise at High Atmospheric Pressure"

Leningrad, Fiziologicheskiy Zhurnal SSSR, No 12, 1971, pp 1,813-1,816

Abstract: The dynamics of external respiration and gas exchange was studied in 8 persons pedaling bicycle ergometer in a compression chamber where they were exposed to air pressure of 5 atm. The intensity of the exercise was stepped up 150 kgm every 5 min to 1,200 kgm/min. There was a linear increase in oxygen consumption. The absolute values of oxygen consumption were significantly higher at each load. The respiratory rate was slower, and the depth of respiration was greater than at normal atmospheric pressure. Another series of experiments designed to determine whether the increased oxygen consumption was related to the oxygen demand showed that the total oxygen demand with a standard load of kgm/min increased by 67% on the average. Thus, work under high pressure requires a higher energy level due to the intensification of respiration which increases the oxygen demand, consumption, and debt.

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USSR

UDC 547.75'321.07:541.69

URITSKAYA, M. Ya., LOGINOVA, V. A., and YAHONTOV, L. N., USSR Institute of Chemical-Pharmaceutical Scientific Research imeni S. Ordzhonikidze, Moscow

"Azaindole Derivatives XLIII: Synthesis of 1-acetyl-4-methyl-7-azatriptamines"

Riga, Akademiya Nauk Latviiskoy SSR, Himiya Geterotsiklicheskih Soedinenii, No 10, Oct 73, pp 1370-1373

Abstract: The synthesis of 1-acetyl-4-methyl-7-azatriptamine from the ethyl ester of (4-methyl-7-azaindolyl-3)acetic acid by way of the 3-(β-chloroethyl)-4-methyl-7-azaindole, followed by replacement of the halogen by a nitro group and reduction of the nitro group to the amine is shown. An alternate method is to remove the halogen by reacting 1-acetyl-3-(β-chloroethyl)-4-methyl-7-azaindole with ammonium hydroxide, potassium bis-(dimethylmethoxysilyl)amide and potassium phthalimide (followed by removal of the phthalimide protector). The IR spectrum was used to determine the final structure.

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USSR

UDC 547.759.3:543.422.25

DVORYANTSEVA, G. G., UL'YANOVA, T. N., SHEYNKER, Yu. N., and YAKHONTOV, L. N., All-Union Scientific Research Chemico-Pharmaceutical Institute imeni S. Ordzhonikidze, Moscow

"Study by the PMR Method of the Protonation of Derivatives of 5-Azaindole"

Riga, Khimiya Geterotsiklicheskikh Soyedineniy, No 6, Jun 73, pp 767-772

Abstract: The protonation of 5-azaindole (I), 5-azaindoline (II), 1-phenyl-5-azaindole (III), 1-phenyl-5-azaindoline (IV), 1-acetyl-5-azaindoline (V), and 4-aminopyridine (VI) by trifluoroacetic acid in solutions with various dielectric constants was studied by the PMR method. Protonation took place at 5-N in the pyridine ring. Spin-spin interaction with 1-N - H was indicated by the PMR spectrum of the monocation of VI. In the monocations of I, II, III, and IV there was a considerable contribution of a quinoid structure with a transfer of the positive charge to N of the pyrrole ring. On the basis of the relations between the chemical shifts of protons of III and IV and the concentration of trifluoroacetic acid in methylene chloride, acetonitrile, and deuteracetone, a mechanism of protonation is proposed according to which the transfer of a proton from the donor to the acceptor in solvents with a low polarity takes place over an initially formed base-acid complex to which hydrogen is bound.

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USSR

UDC 547:754:04:541:138:2.547.759.3:543.253

PALANT, I. N., VAYNSHTEYN, Yu. I., KRASNOKUTSKAYA, D. M., and YAKHONTOV, L. N., All-Union Scientific Research Institute of Chemical Reagents and Chemicals of High Purity, Moscow, and All-Union Scientific Research Chemico-Pharmaceutical Institute imeni S. Ordzhonikidze, Moscow

"Derivatives of Azaindoles. XLII. Polarographic Oxidation and Dehydrogenation of 5-Azaindolines and 5,7-Diazaindolines"

Riga, Khimiya Geterotsiklicheskikh Soyedineniy, No 6, Jun 73, pp 773-776

Abstract: Polarographic oxidation of 5-azaindolines, 7-azaindolines, and 5,7-diazaindolines (22 compounds listed in a table) was carried out on a rotating Pt anode, using the method described by T. K. Adler and A. Albert, J. Chem. Soc., 1794, 1960. The relative facility of oxidation corresponded to that of dehydrogenation by the action of quinones. $E_{1/2}$ increased on transition from 7-azaindolines to 5-azaindolines and further to 5,7-diazaindolines. The effect of substituents could be well described by cross-correlation equations (cf. Vaynshteyn et al, Khim. Geterotsikl. Soyed., 1106, 1969). Deviations from the correlation were associated with the lactam-lactim tautomeric equilibrium of 6-hydroxy 5- and 7-azaindolines.

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USSR

UDC 615.212:547.834.47.0121

NIKITSKAYA, YE. S., ARUTYUNYAN, G. S., SHVARTS, G. YA., MASHKOVSKIY, M. D., and YAKHONTOV, L. N., All Union Scientific Chemical-Pharmaceutical Research Institute imeni S. Ordzhonikidze, Moscow

"Synthesis and Pharmacological Study of Substituted 2,2,6,6-Tetramethyl-4--aminopiperidyl-4-carboxamides"

Moscow, Khimiko-Farmatsevticheskiy Zhurnal, Vol 7m No 9, Sep 73, pp 16-19

Abstract: Derivatives of 2,2,6,6-tetramethyl-4-aminopiperidyl-4-carboxamide (I) -- analogues of the pyrithramide -- were synthesized in search for new analgesic agents. The reaction sequence was based on triacetoneamine being converted through the triacetoneaminecyanohydrine to 2,2,6,6-tetramethyl-4--(N-substituted)amino-4-cyanopiperidines which could be converted with 90% sulfuric acid at 100° to (I). Further alkylation of these carboxamides was very difficult. Pharmacological studies carried out on these products showed that steric hindrance around the cyclic nitrogen atom with methyl groups did not improve the analgesic or other pharmacological properties of the parent agents.

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USSR

UDC 547.822.7'759:542.958.3:541.67:543.422.4.6' 1'544

POSHARSKIY, A. F., KUZ'MENKO, V. V., AZIMOV, V. A., and YAKHONTOV, L. N., Rostov State University, Rostov-on-the-Don, All Union Scientific Chemical-Pharmaceutical Research Institute imeni S. Ordzhonikidze, Moscow

"Chichibabin Reaction in the Series of Aminopyridines, Azaindoles, and Azaindolines"

Riga, Khimiya Geterotsiklicheskikh Soyedineniy, No 9, Sep 73, pp 1232-1239

Abstract: In contrast to 3- and 4-aminopyridines the 2-isomers can be aminated with sodium amide to yield 2,6-diaminopyridine. Among the dimethylaminopyridines the 3- and 4-isomers are the most reactive ones in the Chichibabin reaction. 2-Dimethylaminopyridine can be converted with difficulty to 2,6-diaminopyridine in a reaction with sodium amide, the first step being the replacement of the dimethylamino radical with the amino group. Azaindoles and azaindolines do not react in the amination reaction. Under the influence of sodium amide 1-phenyl-5-azaindole opens its pyrrole cycle forming 3-vinyl-4-phenylaminopyridine.

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USSR

UDC 615.22:547.834.4

MIKHLINA, YE. YE., ZAYTSEVA, K. A., VOROB'YEVA, V. YA., MASHKOVSKIY, M. D., and YAKHONTOV, L. N., All Union Scientific Chemical-Pharmaceutical Research Institute Imeni S. Ordzhonikidze, Moscow

"Synthesis and Pharmacological Study of the Derivatives of 3-Hydroxy- and 3-Aminoquinuclidines"

Moscow, Khimiko-Farmatsevticheskiy Zhurnal, Vol 7, No 8, Aug 73, pp 20-24

Abstract: A series of substituted quinuclidines was synthesized. To obtain 3-(2'hydroxybenzoyloxy)quinuclidine and related ethers, the 3-hydroxyquinuclidine was reacted with benzoic acid chlorides in pyridine at 20° or 100°. 3-Acylaminoquinuclidines were synthesized by reacting 3-aminoquinuclidine with respective acid chlorides. Two methods were used to prepare 3-alkyl- and 3-arylaminoquinuclidines: reduction of the 3-acylaminoquinuclidine with $LiAlH_4$, and reductive alkylation of 3-aminoquinuclidines with various carbonyl compounds, or of the respective amines with 3-ketoquinuclidine. The pharmacological studies were carried out using 3-benzoyloxyquinuclidine hydrochloride as the standard.
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USSR

(1)

MIKHLINA, YE. YE., et al., Khimiko-Farmatsevticheskiy Zhurnal, Vol 7, No 8, Aug 73, pp 20-24

Only the ethers containing OH, CH_3 or Cl in the phenyl ring approached the activity of the standard compound. The rest of the derivatives had a diminished pharmacological effect or lacked it altogether.

2/2

USSR

UDC 547.75'821.07:542.944'958

YAKHONTOV, L. N., and LAPAN, Ye. I., All-Union Scientific Research Chemical and Pharmocological Institute imeni S. Ordzhonikidze, Moscow

"Derivatives of Azaindoles. XLI. Synthesis of 3-Substituted 5-Azaindoles"

Riga, Khimiya Geterotsiklicheskikh Soyedineniy, No 11, 1972, pp 1528-1530

Abstract: The electrophilic cyanomethylation, bromination, nitration, and Mannich reaction of 5-azaindoles were performed, and in spite of literature reports to the contrary, are analogous to the reactions for the 4- and 7-isomers. Preparation, yield, and characteristics are given for the compounds 3-bromo-5-azaindole; 5-azagramine; 1-phenyl-5-azagramine; 5-azaindole-3-acetonitrile; 5-azaindonyl-3-acetic acid; amide 5-azaindonyl-3-acetic acid; and the cyanomethylation of 5-azaindole.

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USSR

UDC 547.834.4:543.51

YERMAKOV, A. I., SHEYNKER, Yu. N., MIKHLINA, YE. YE., YANINA, A. D., YAKHONTOV, L. N., and KOSTYANOVSKIY, R. G., All-Union Scientific Research Chemico-Pharmaceutical Institute imeni S. Ordzhonikidze, Moscow

"Mass Spectra of Some 3-Substituted Benzo/b/quinuclidines. III"

Riga, Khimiya Geterotsiklicheskikh Soyedineniy, No 6, Jun 72, pp 825-832

Abstract: The mass spectra of 3-methoxycarbonyl-, 3-ethoxycarbonyl-, 3-(2-dimethylaminoethoxy)carbonyl-, 3-amino-, 3-hydroxymethyl-, 3-chloro-3-methoxycarbonyl-, 3-chloro-3-ethoxycarbonyl-, and 3-chloro-3-cyanobenzo-/b/quinuclidine were studied. The results indicated that fragmentation of these compounds by electron impact took place over the formation of an open molecular ion that generally resulted upon cleavage of the bridge group containing the substituent or substituents. The C-Cl group had the weakest bond in the molecular ions derived from the disubstituted compounds - hence, $C^{\oplus}$ readily split off from the Cl-Ch-X group (X=COOR, CN) with the formation of a =CH - X group.

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USSR

UDC 547.834.4+541.634

MIKHLINA, YE. YE., YANINA, A. D., ALEKSEYEVA, L. M., TURCHIN, K. F., SHEYNKER, YU. N., YAKHONTOV, L. N., DYUK, R. F., RICHARD, A. YA., and KATRITSKIY, A. R., All-Union Scientific Research Pharmaceutical Chemical Institute imeni S. Ordzhonikidze, Moscow and Chemistry Department, University of East Anglia at Norwich, Great Britain

"Reaction of Benzo [b]quinuclidine with Electrophilic Reagents"

Riga, Khimiya Geterotsiklicheskikh Soyedineniy, Academy of Sciences Latvian SSR, No 3, 1971, pp 385-388

Abstract: Electrophilic substitution of benzo [b] quinuclidine (I) was studied: bromination, nitration, and sulfochlorination. These results are closely related to the absence of p-π electron interaction in I. When I is brominated in several different solvents (acetic acid, chloroform) at 0, 20, and 60° (with or without catalysts), only the perbromide of I and a molecular complex of I with bromine were obtained. The absence of the p-π mesomeric effect in I is shown by its pK. In contrast to bromination, nitration and sulfochlorination of I form products of electrophilic substitution. When I is treated with a nitrating mixture at temperatures from -4 to -7°, mononitrobenzo [b] quinuclidine is formed. When I is treated with chlorosulfonic acid, first at 0° and then at 50°, benzo [b]quinuclidine-sulfonyl chloride is formed.

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USSR

UDC 615.31:547.834.4

LEVKOYEVA, YE. I., NIKITSKAYA, YE. S., SHARAPOV, I. M. and YAKHONTOV, L. N.; All-Union Scientific-Research Chemico-Pharmacological Institute imeni S. Ordzhonikidze, Moscow

"Synthesis and Pharmalogical Study of the Polyalkylquinonucleidnes"

Moscow, Khimiko-Farmatsevticheskiy Zhurnal, Vol 5, No 9, 1971, pp 16-21

Abstract: The high ganglioblocking and hypotensive activity of hydrobromide 2,2,6,6-tetramethylchinuclidine (recommended in the form of the preparation "Temekhine" for wide medical use by the USSR Ministry of Public Health) prompted research into other polyalkylchinuclidines. Sixteen members of this group were studied by the authors. Basic chemico-physical data were determined, along with some information on toxicity.

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USSR

UDC 547.834.4

LEVKOYEVA, YE. I., NIKITSKAYA, YE. S., and YAKHONTOV, L. N., All-Union Scientific Research Pharmaceutical Institute imeni S. Ordzhonikidze, Moscow

"Synthesis and Conversions of 6,6,7,7-Tetramethylquinuclidone-2"

Riga, Khimiya Geterotsiklicheskikh Soyedineniy, Academy of Sciences Latvian SSR, No 3, 1971, pp 378-384

Abstract: A new representative of the quinuclidone-2 series -- 6,6,7,7-tetramethylquinuclidone-2 (I) -- was synthesized from (2,2,6,6-tetramethyl-piperidyl-4)acetic acid (II) by converting the latter to its acid chloride and then treating it with triethylamine. I has the following properties: λ_{max} 230 microns (in alcohol), pK_a 6.37 $\pm$ 0.05 (in water, determined potentiometrically), and dipole moment 3.95 D (in benzene). I participates in three types of chemical reactions: 1) in reaction with protonic nucleophilic agents (water, alcohols, amines, hydroxylamine, and hydrazines), the N-CO bond is ruptured and the nucleophilic agents are alkylated. I reacts more readily with nucleophilic reagents than do other amides, ranking between ketones and acid halides. 2) Unusual conversions are observed when the amide of I is treated with nucleophilic agents in aprotic media (phenyllithium in ether, phosphorus

USSR

LEVKOYEVA, YE. I., et al., Khimiya Geterotsiklicheskikh Soyedineniy, No 3, 1971, pp 378-384

pentachloride in benzene, acetone cyanohydrin, and lithium aluminum hydride in ether). The N-C $(CH_3)_2$ bond is ruptured with the formation of 4-substituted 6,6-dimethylpiperidones-2. 3) When I is treated with electrophilic reagents (hydrogen chloride and methyl iodide) in aprotic solvents, reactions occur with the retention of the quinuclidine ring. This is also true in the reduction reaction of I.

2/2

USSR UDC 547.759.3

YAKHONTOV, L. N., KRASNOKUTSKAYA, D. M., AKALAYEV, A. N., PALANT, I. N. and VAINSHTEIN, YU. I., All Union Scientific Chemical-Pharmaceutical Research Institute Imeni S. Ordzhonikidze, Moscow

"Azaindole Derivatives. XXXIX. Reactions of 6-Chloro-7-Azaindolines with Amines"

Riga, Khimiya Geterotsiklicheskikh Soyedineniy, No 6, Jun 71, pp 789-794

Abstract: During the reactions of various primary and secondary amines with 6-chloro-7-azaindolines the normal nucleophilic substitution is accompanied by oxidation-reduction processes yielding concurrently dehalogenated products of 7-azaindolines and oxidation compounds -- 6-amino-7-azaindole derivatives. The ratio of the nucleophilic substitution products to the compounds obtained from the oxidation-reduction reaction depends principally on the nucleophilicity of the attacking amine. By selecting properly the amine component the reaction may be directed toward nucleophilic substitution, or toward the oxidation-reduction route. For example, when 1-phenyl-4-methyl-6-chloro-7-azaindoline reacts with basic amines such as pyrrolidine, piperidine, the normal products - the derivatives of 6-amino-7-azaindoline -- are formed in 90% yield. When morpholine is used instead, the normal product drops to a 64% yield, and with

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USSR

YAKHONTOV, L. N., et al., Khimiya Geterotsiklicheskikh Soyedineniy, No 6, Jun 71, pp 789-794

N-methylpiperazine it drops tc 56%. In the meantime the dehalogenated products go from 1% to 7-8% to 28% respectively.

2/2

1/2 012 UNCLASSIFIED PROCESSING DATE--13NOV70
TITLE--REDUCTION OF 1,7,DIAZABICYCLO,4.3.0, NON,SIGMA,ENE AND 2,3,DIHYDROIMIDAZO, 1,2,A, PYRIDINE AS AZACYCLIC COMPOUNDS WITH AMIDINE
AUTHOR-(03)-YAKHONTOV, L.N., VOROBYEVA, V.YA., MIKHLINA, E.E.

COUNTRY OF INFO--USSR

SOURCE--KHIM. GETEROTSIKL. SOEDIN. 1970, (4), 495-7

DATE PUBLISHED--------70

SUBJECT AREAS--CHEMISTRY, BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--CHEMICAL REDUCTION, MOLECULAR STRUCTURE, AROMATIC AMINE, SECONDARY AMINE, PRIMARY AMINE, ORGANIC AZO COMPOUND, PYRIDINE, AROMATIC KETONE, HYDROGENATION, HETEROCYCLIC NITROGEN COMPOUND

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--3005/1349 STEP NO--UR/0409/70/000/004/0495/0497

CIRC ACCESSION NO--AP0133303
UNCLASSIFIED

2/2 012 UNCLASSIFIED PROCESSING DATE--13NOV70
CIRC ACCESSION NO--AP0135303
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. REDUCTION OF 1,7,DIAZABICYCLO, 4.3.0, NON,OMEGA,ENE AND 2,3,DIHYDROIMIDAZO, 1,2,A, PYRIDINE AS AZACYCLIC COMPOUNDS WITH AMIDINE STRUCTURE. (SHOWN ON MICROFICHE).
FACILITY: VSES. NAUCH.-ISSLED. KHIM.-FARM. INST., IM. ORDZHONIKIDZE, MOSCOW, USSR.

UNCLASSIFIED

1/2 011 UNCLASSIFIED PROCESSING DATE--27NOV70
TITLE--REDOX PROCESSES DURING NUCLEOPHILIC SUBSTITUTIONS IN A SERIES OF 6,CHLORO,7,AZAINDOLINES -U-
AUTHOR-(03)-YAKHONTOV, L.N., KRASNOKUTSKAYA, D.M., AKALAYEV, A.N.

COUNTRY OF INFO--USSR

SOURCE--DOKL. AKAD. NAUK SSSR 1970, 192(1), 118-20

DATE PUBLISHED-------70

SUBJECT AREAS--CHEMISTRY, BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--REDOX REACTION, CHLORINATED ORGANIC COMPOUND, INDOLE DERIVATIVE, HETEROCYCLIC NITROGEN COMPOUND, AMINE, MORPHOLINE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--3004/1856 STEP NO--UR/0020/70/192/001/0118/0120

CIRC ACCESSION NO--AT0132121
UNCLASSIFIED

2/2 011 UNCLASSIFIED PROCESSING DATE--27NOV70

CIRC ACCESSION NO--AT0132121

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT.

1,PHENYL,4,METHYL,6,CHLORO,7,AZAINDOLINE (I) REACTS WITH CYCLIC SECONDARY AMINES TO FORM THE NORMAL NUCLEOPHILIC SUBSTITUTION PRODUCTS AS WELL AS, IN CASE OF INSUFFICIENTLY NUCLEOPHILIC AMINES, PRODUCTS OF REDN. AND OXIDN. REACTIONS WERE RUN IN AN AUTOCLAVE AT 250DEGREES, 10 HR WITH 2 MOLES AMINE PER MOLE I. THUS, N,METHYLPIPERAZINE GAVE 27PERCENT 1,PHENYL,4,METHYL,7,AZAINDOLINE (II) AND 47PERCENT 1, PHENYL,4,METHYL,6,(4,METHYLPIPERAZINO),7,AZAINDOLINE (III), M. 132-3DEGREES. MORPHOLINE GAVE 57PERCENT 6,MORPHOLINO ANALOG OF III, M. 159-60DEGREES, ALONG WITH 8-12PERCENT II. PYRROLIDINE GAVE 91-2PERCENT 6,PYRROLIDINO ANALOG OF III, M. 164-5DEGREES, WHILE REACTION WITH PIPERIDINE GAVE 72-90PERCENT 6,PIPERIDINO ANALOG OF III, M. 119-20DEGREES. THE REACTIONS GAVE 0.8-8PERCENT IV (R SHOWN): 4,METHYLPIPERAZINO, M. 212-15DEGREES; MORPHOLINO, M. 220-20DEGREES; AND PIPERIDINO, M. 206-8DEGREES; THESE WERE PREPD. ALTERNATIVELY BY HEATING III WITH CHLORANIL IN XYLENE. THUS STRONG AMINES, WITH PKA ABOUT 11, GAVE 90-2PERCENT NORMAL SUBSTITUTION PRODUCT III; A WEAKER AMINE SUCH AS MORPHOLINE (PKA 8.7) GAVE BUT 57PERCENT III, WHILE METHYLPIPERAZINE GAVE BUT 47-8PERCENT III WITH 27PERCENT DEHALOGENATION PRODUCT.

FACILITY: VSES. NAUCH. ISSLED. KHIM. FARM. INST. IM. ORDZHONIKIDZE, MOSCOW, USSR.

UNCLASSIFIED

1/2 013 UNCLASSIFIED PROCESSING DATE--27NOV70
TITLE--NON STEROID ANTIPHLOGISTIC DRUGS -U-

AUTHOR-(03)-GLUSHKOV, R.G., LIBERMAN, S.S., YAKHONTOV, L.N.

COUNTRY OF INFO--USSR

SOURCE--ZH. VSES. KHIM. OBSHCHEST. 1970, 15(2), 185-92

DATE PUBLISHED-------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--ANTIINFLAMMATORY DRUG, INDOLE, DRUG EFFECT

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--3009/0121 STEP NO--UR/0063/70/015/002/0185/0192

CIRC ACCESSION NO--AP0138986

UNCLASSIFIED

2/2 013 UNCLASSIFIED PROCESSING DATE--27NOV70

CIRC ACCESSION NO--AP0138986

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. A REVIEW COVERING AROM. AND HETEROCYCLIC DERIVS. OF ORG. ACIDS WITH ANTIPHLOGISTIC PROPERTIES, AND INCLUDING DERIVS. OF INDOLE, TRIAZOLE AND RELATED RING SYSTEMS, WITH A BRIEF DISCUSSION OF THE MODE OF ACTION OF THESE DRUGS.

UNCLASSIFIED

1/4 013 UNCLASSIFIED PROCESSING DATE--11SEP70

TITLE--AZAINDOLE DERIVATIVES. XXI. SYNTHESIS OF 3-SUBSTITUTED 4-AZAINDOLES

-U-

AUTHOR--YAKHONTOV, L.N., AZIMOV, V.A.

COUNTRY OF INFO--USSR

SOURCE--KHIM. GETEROTSIKL. SOEDIN. 1970, (1), 32-6

DATE PUBLISHED-------70

SUBJECT AREAS--CHEMISTRY, BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--CHEMICAL SYNTHESIS, INDOLE DERIVATIVE, NITRATION, BROMINATION, ALKYLATION, CYANIDATION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1986/0475 STEP NO--UR/0409/70/000/001/0032/0036

CIRC ACCESSION NO--AP0102485

UNCLASSIFIED

2/4 013 UNCLASSIFIED

CIRC ACCESSION NO--AP0102485 PROCESSING DATE--11SEP70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. IN THE COURSE OF A STUDY OF CYANOMETHYLATION, BROMINATION, NITRATION AND THE MANNICH REACTION WITH 4,AZAINDOLE (I) (R EQUALS R PRIME1 EQUALS H) (IA) A NO. OF NEW 3,SUBSTITUTED,4,AZAINDOLES WERE SYNTHESIZED. THE INFLUENCE OF AN ACETYL RADICAL AT THE 1 POSITION ON THERE ACTIVITY OF IA WAS ALSO STUDIED. THUS, 0.92 G PARAFORMALDEHYDE AND 6.8 G ME SUB2 NH.HCL WAS ADDED TO A SOLN. OF 3.17 G IA IN 86 ML TBUOH, AND THE MIXT. REFLUXED 15 MIN TO GIVE 4.62 G I (R EQUALS H, R PRIME1 EQUALS CH SUB2 NME SUB2) (II), M. 127-8.5DEGREES (C SUB6 H SUB6). THE INFLUENCE OF TEMP., REACTION TIME, AND REAGENT RATIO ON THE COURSE OF THE ABOVE MANNICH REACTION WAS STUDIED; IA, II, AND III FORMED WERE SEPD. FROM EACH OTHER BY CHROMATOG. ON AL SUB2 O SUB3; ET SUB2 O ELUTED I AND II SUCCESSIVELY, AND III WAS THEN REMOVED BY MEOH. TO A STIRRED SOLN. OF 2 G IA IN 25 ML DIOXANE WAS ADDED DROPWISE 3.12 G BR IN 50 ML DIOXANE AT 15DEGREES TO GIVE 4 G I.HBR (R EQUALS H, R PRIME1 EQUALS BR) (IV.HBR) M. 243.5-4.5DEGREES; IV M. 228DEGREES (ALC.). IA (2 G) WAS SLOWLY ADDED WITH STIRRING IN SMALL PORTIONS TO 20 ML HNO SUB3 (D. 1.52) AT MINUS 15DEGREES, AND THE MIXT. STIRRED 1 HR AT 0DEGREES TO GIVE 2.73 G BRIGHT YELLOW I (R EQUALS H, R PRIME1 EQUALS NO SUB2), M. 348DEGREES (HCONME SUB2). A MIXT.

UNCLASSIFIED

3/4 013 UNCLASSIFIED

CIRC ACCESSION NO--AP0102485 PROCESSING DATE--11SEP70

ABSTRACT/EXTRACT--OF 6.33 G IA, 5.45 G 96DEGREES KCN, 4.46 G 40PERCENT FORMALIN, 1.49 G MECO SUB2 K, 1.75 G AL SUB2 O SUB3, AND 40 ML 85PERCENT ETOH WAS HEATED WITH STIRRING 4 HR IN A STAINLESS STEEL AUTOCLAVE AT 120DEGREES AND INITIAL PRESSURE 10 ATM (N) TO GIVE 3 G III, M. 292-3DEGREES (HCONME SUB2), AND A PRODUCT WHICH WAS DRIED IN VACUO OVER P SUB2 O SUB5 AND REFLUXED 6 HR WITH 100 ML ALC. HCL TO GIVE 5.2 G I (R EQUALS H, R PRIME1 EQUALS CH SUB2 CO SUB2 ET) (V), M. 142-4DEGREES (C SUB6 H SUB6). V (2.5 G) AND 30 ML 17PERCENT HCL WAS REFLUXED 6 HR TO GIVE 2.34 G I.HCL (R EQUALS H, R PRIME1 EQUALS CH SUB2 CO SUB2 H), M. 207-8DEGREES (DECOMPN.). V (2 G) AND 3 G LIQ. NH SUB3 IN A 55 ML STAINLESS STEEL AUTOCLAVE WAS HEATED 5 HR ON A WATER BATH TO GIVE 1.3 G I (R EQUALS H, R PRIME1 EQUALS CH SUB2 CONH SUB2) (VI), M. 209-11DEGREES (ISO-PROH). TO A REFLUXING SOLN. OF 1.57 G LIALH SUB4 IN 100 ML THF WAS ADDED A SOLN. OF 1.34 G VI, AND REFLUXING CONTINUED 6 HR TO GIVE 1.45 G I.2HCL (R EQUALS H, R PRIME1 EQUALS CH SUB2 CH SUB2 NH SUB2), M. 257-8DEGREES. IA (8 G) WAS MIXED WITH 50 ML AC SUB2 O (EXOTHERM) AND THE MIXT. KEPT OVERNIGHT GAVE 8.7 G I.HOAC (R EQUALS AC, R PRIME1 EQUALS H) (IB.HOAC), M. 77-8DEGREES, AND 3.48 G IB, B SUB10 128DEGREES, M. 77-8DEGREES; MIXED M.P. WITH IB.HOAC 55-8DEGREES. BY THE INTRODUCTION OF AN AC GROUP IN THE 1 POSITION IN IA, ITS REACTIVITY WAS GREATLY REDUCED. THUS, IB IN THE MANNICH REACTION GAVE ONLY 28PERCENT OF I (R EQUALS AC, R PRIME1 EQUALS CH SUB2 NME SUB2), AND ON BROMINATION, ONLY 27PERCENT I (R EQUALS AC, R PRIME1 EQUALS BR) (VII), M. 124-5DEGREES (C SUB6 H SUB6). VII, HOWEVER, WAS OBTAINED IN 88.6PERCENT YIELD FROM IV.

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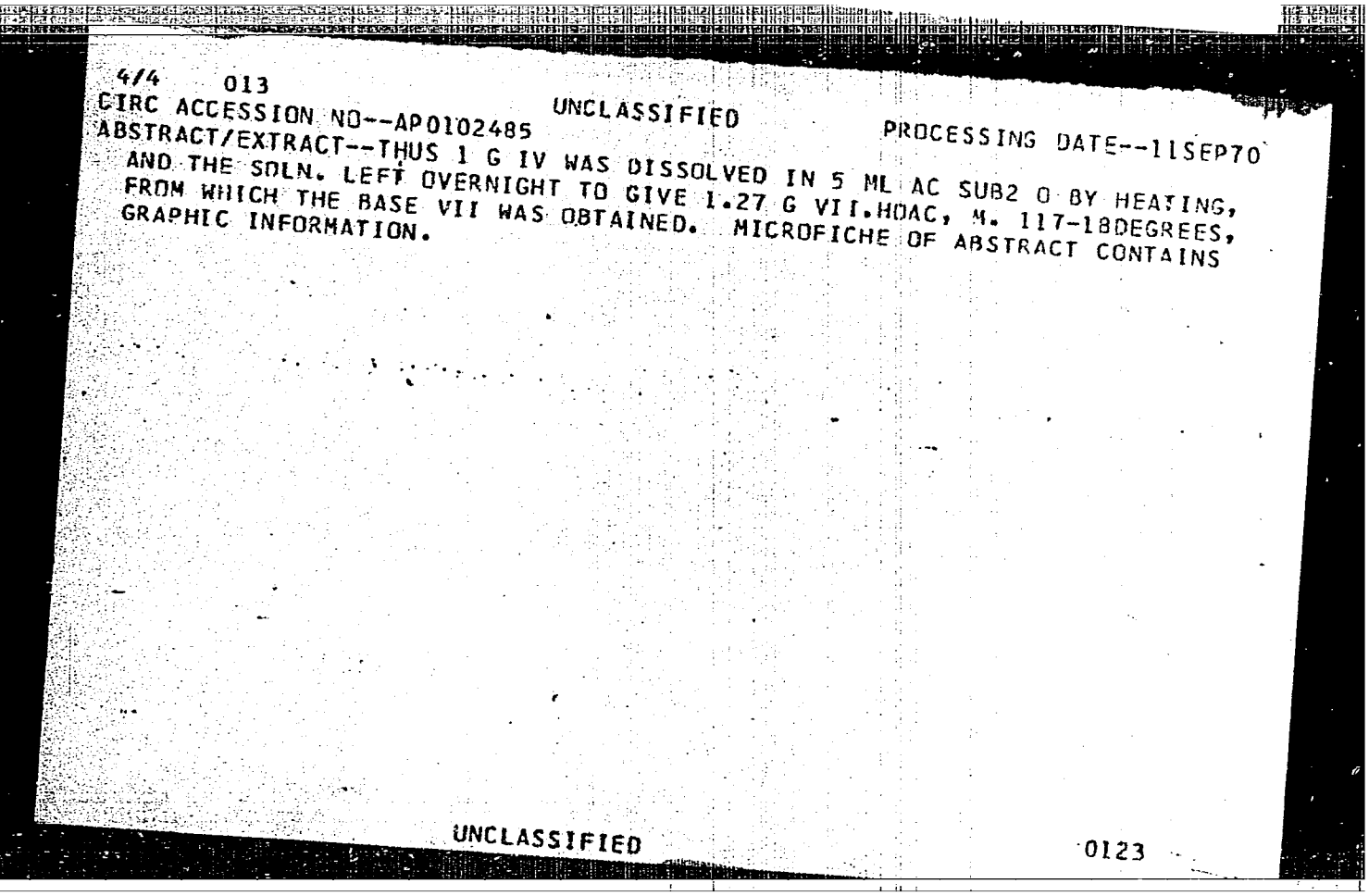

4/4 013 UNCLASSIFIED PROCESSING DATE--11SEP70

CIRC ACCESSION NO--AP0102485

ABSTRACT/EXTRACT--THUS 1 G IV WAS DISSOLVED IN 5 ML AC SUB2 O BY HEATING, AND THE SOLN. LEFT OVERNIGHT TO GIVE 1.27 G VII.HOAC, M. 117-18DEGREES, FROM WHICH THE BASE VII WAS OBTAINED. MICROFICHE OF ABSTRACT CONTAINS GRAPHIC INFORMATION.

UNCLASSIFIED 0123

USSR

UDC 547.821.792'759.32:542.97

YAKHONTOV, L. N., SUVOROV, N. N., KANTEROV, V. YA., PODKHALYUZINA, N. YA., PRONINA, YE. V., STAROSTENKO, N. YE., and SHKIL'KOVA, V. N., All-Union Research Institute of Chemical Pharmaceutics imeni S. Ordzhonikidze, and the Moscow Institute of Chemical Engineering imeni D. I. Mendeleyev

"The Heterogenous Fischer Catalytic Reaction. IV. Catalytic Synthesis of 7-Azaindole and 2-Methyl-7-azaindole in the Presence of γ-Al_2O_3"

Riga, Khimiya Geterotsiklicheskikh Soyedineniy, No 5, 1972, pp 656-658

Abstract: This is the first report of the synthesis of 7-azaindole (I) and 2-methyl-7-azaindole (II) by cyclization, respectively, of acetaldehyde pyridyl-2-hydrazone (III) or acetone pyridyl-2-hydrazone (IV) over γ-Al_2O_3 or γ-Al_2O_3 (2.6% F) at high temperatures. Both reactions, in addition to I or II, also yielded 2-amidopyridine and 3-methyl-s-triazole[3,4-a]-pyridine. Prior to the experiments the catalysts were activated by exposure to a flow of dry air for 6 hr. at 600°C for γ-Al_2O_3 and at 500°C for γ-Al_2O_3(2.6% F); III and IV were purified by recrystallization from hexane. For the reaction, 7% benzene solutions of III or IV were passed over one or the other of the catalysts at temperatures ranging from 250° to 500°C. The products of the reaction were separated

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USSR

YAKHONTOV, L. N., Khimiya Geterotsiklicheskikh Soyedineniy, No 5, 1972, pp 656-658

either by partition chromatography on an aluminum oxide column or, in the case of I, by gas-liquid chromatography. Evaluation of the results showed that the fluorinated catalyst functioned more efficiently; with this catalyst the maximum yield of I was obtained at 420°C and amounted to 15%, while that of II approached 50% at 315°C.

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USSR UDC: 621.374.5(088.8)

GAYEVSKIY, V. B., YAKHONTOV, V. P.

"A Device for Shaping Pulses From a Sinusoidal Voltage"

USSR Author's Certificate No 268488, filed 11 Feb 69, published 18 Aug 70 (from RZh-Radiotekhnika, No 1, Jan 71, Abstract No 1G248 P)

Translation: This Author's Certificate introduces a device for shaping pulses from a sinusoidal voltage. The unit contains conversion circuits and limiter amplifiers. To extend the amplitude and frequency ranges and obtain pulses with leading edges corresponding to the position of the points of the maximum and minimum of the input sinusoidal voltage which varies in amplitude and frequency, connected to the signal source are two identical circuits loaded by outputs of different polarity, each of which is comprised of a series-connected network of a transition capacitor, a limiter made up of a semiconductor diode and a grounded resistor, a differential network and an amplifier. The semiconductor diodes are connected in opposition.

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USSR

UDC 547-94

YAKHONTOVA , L. D., KOMAROVA, M. N., PEREL'SON, M. YE., BLINOVA, K. F., and TOLKACHEV, O. N., All Union Scientific Research Institute of Medicinal Plants, Leningrad Chemical-Pharmaceutical Institute

"Hypecoum Erectum Alkaloids. Structure of Hypecorine and Hypecorinine"

Tashkent, Khimiya Prirodnykh Soyedinenii, No 5, 1972, pp 624-628

Abstract: Two new alkaloids were isolated from the Hypecoum erectum L. grass -- hypecorine, m.p. 154-156° and hypecorinine, m.p. 197-198°. The structures of these compounds were determined on the basis of their chemical reactions and IR, UV, NMR, and mass-spectroscopic data. Hypecorine was assigned the structure of 7-methyl-2,3,11,12-dimethylenedioxy-9-oxahomospirobenzyltetrahydroisoquinoline, and hypecorinine was identified as 7-methyl-2,3,11,12-dimethylenedioxy-15-keto-9-oxahomospirobenzyltetrahydroisoquinoline. Both compounds are optically inactive, probably due to the ease of the racemization stemming from their spiroaminoketal structures.

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UDC 547.94

USSR

YAKHONTOVA, L.D., SHEYCHENKO, V.I., and TOLKACHEV, O.N.,
All Union Scientific Research Institute of Medicinal Plants

"Study of the Glaucium Flavum Alkaloids. The Structure of Glauvine"

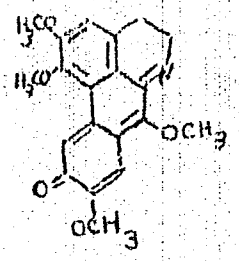
Tashkent, Khimiya Prirodnykh Soyedineniy, No 2, 1972, pp 214-218

Abstract: The alkaloids extracted from Glaucium flavum with chloroethane were subjected to chromatographic separation on an aluminum oxide packed column. The separation of alkaloids was accomplished by elution with benzene and benzene-methanol mixtures containing successively higher fractions of methanol (eluent of gradually increasing polarity). In addition to the earlier found components (glaucine, isocoridine, protopine and isoboldine) three new bases were eluted: (1) a yellow substance of $C_{20}H_{17}NO_5$ composition, identified as O-methylateroline; (2) a colorless substance of $C_{19}H_{21}NO_4$ composition identified as sinocutine; and (3) a green substance of $C_{20}H_{17}NO_5$ composition, previously unreported in literature, was named glauvine. It was found that glauvine can be obtained by heating o-methylateroline at 150° C for 18-20 hours. Acid solutions of glauvine are orange in color, while

USSR

YAKHONTOVA, L.D., et al, Khimiya Prirodnykh Soyedineniy, No 2, 1972, pp 214-218

alkaline solutions are green. UV spectra of glauvine and O-methylateroline are very similar indicating the similarities in their chromophoric groups. On the basis of IR and NMR spectroscopic studies the following structure is proposed for glauvine.



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UDC 541.183.24

USSR

VAYSBERG, E. S., YAKHONTOVA, L. F., and BRUNS, B. P., All-Union Scientific Research Institute of Antibiotics

"Ion Exchange Kinetics of Large Organic Ions on Carboxylic Cationites. V. Resilient Properties of Cations with Different Degree of Substitution of Inorganic Sodium Anti-ions by the Streptomycin Ions"

Moscow, Zhurnal Fizicheskoy Khimii, Vol 44, No 9, Sep 70, pp 2361-2363

Abstract: Resilient properties of the grains of Zerolite 226 cationite were studied under conditions of different degree of crosslinking of the sorbent as related to the ionite's content of organic anti-ions and temperature. With transition of the carboxyl cation from the sodium form to the organic form, the grain resilience decreases but only when the sorbent has a specific degree of crosslinking. Lower resilience of the ionite grains is evidently due to the fact that the triple charge streptomycin ions act in a way as an additional cross-linkage.

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1/2 009 UNCLASSIFIED PROCESSING DATE--16OCT70

TITLE--ELIMINATION OF CERTAIN ADMIXTURES IN THE PROCESS OF ISOLATION AND CHEMICAL PURIFICATION OF STREPTOMYCIN -U-

AUTHOR-(04)-BOGATSKIY, M.A., VISHNEVSKIY, V.M., YAKHONTOVA, L.F., BRUNS, B.P.

COUNTRY OF INFO--USSR

SOURCE--ANTIBIOTIKI, 1970, VOL 15, NR 5, PP 406-411

DATE PUBLISHED-------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--STREPTOMYCIN, CHEMICAL PURIFICATION, FERMENTATION, CATION EXCHANGE RESIN

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1994/0154 STEP NO--UR/0297/70/015/005/0406/0411

CIRC ACCESSION NO--AP0114550

UNCLASSIFIED

UNCLASSIFIED PROCESSING DATE--16OCT70

2/2 009

CIRC ACCESSION NO--AP0114550

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE PROCESS OF ELIMINATION OF CERTAIN ADMIXTURES, SUCH AS MAGNESIUM, STREPTIDINE AND STREPTOBIOZAMINE PRESENT IN STREPTOMYCIN FERMENTATION BROTH FILTRATES DURING THE ANTIBIOTIC SORPTION BY CARBOXYLIC CATION EXCHANGE RESINS WAS STUDIED. IT WAS SHOWN THAT THE EFFICACY OF ELIMINATION OF THE ADMIXTURES SORBED BY THE RESINS DEPENDED ON THE SOLUTION COMPOSITION USED FOR THEIR SORPTION. THE STAGE OF THE ADMIXTURE SORPTION WAS IMPROVED.

FACILITY: KIEV PLANT OF MEDICAL PREPARATIONS, NATIONAL INSTITUTE FOR ANTIBIOTICS, MOSCOW.

UNCLASSIFIED

1/2 019 UNCLASSIFIED PROCESSING DATE--16OCT70

TITLE--THE EFFECT OF PARENTERAL HIGH PROTEIN NUTRITION ON THE EXTERNAL SECRETORY FUNCTION OF THE PANCREAS IN PATIENTS WITH CHRONIC PANCREATITIS

AUTHOR-(02)-YAKHONTOVA, O.I., VALENKEVICH, L.N.

COUNTRY OF INFO--USSR

SOURCE--VOPROSY PITANIYA, 1970, NR 3, PP 67-70

DATE PUBLISHED--------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--PANCREATITIS, PARENTERAL NUTRITION, DUODENUM, ENZYME ACTIVITY, BICARBONATE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1998/0002 STEP NO--UR/0244/70/000/003/0067/0070

CIRC ACCESSION NO--AP0120702
UNCLASSIFIED

2/2 019 UNCLASSIFIED PROCESSING DATE--16OCT70

CIRC ACCESSION NO--AP0120702

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. INTRAVENOUS DROP BY DROP INFUSION OF AMINOPEPTIDE 2 WAS PRACTISED IN TREATING 68 PATIENTS SUFFERING FROM CHRONIC PANCREATITIS. IN DOING THIS, APART FROM THE CLINICAL EFFECT, RECORD WAS ALSO TAKEN OF THE TRYPSIN, AMYLASE, LIPASE, ENTEROKINASE, ALKALINE PHOSPHATASE ACTIVITY; BICARBONATE ALKALINITY, TOTAL AND RESIDUAL NITROGEN AND THE AMOUNT OF JUICE IN THE DUODENAL CONTENTS. THE TRYPSIN, TRYPSIN INHIBITOR, LIPASE AND AMYLASE ACTIVITY IN THE BLOOD WAS ALSO MEASURED. INVESTIGATIONS WERE EFFECTED 1.5-2 HOURS AFTER A SINGLE INTRODUCTION OF AMINOPEPTIDE AND AT THE END OF THE MEDICATION COURSE. AMINOPEPTIDE 2 WAS FOUND TO PRODUCE A BENEFICIAL EFFECT ON THE CLINICAL COURSE OF CHRONIC PANCREATITIS. THE DUODENAL CONTENTS AND BLOOD DEMONSTRATED NORMALIZATION OF THE PROTEOLYTIC ENZYMES AND ENTEROKINASE ACTIVITY AND A TENDENCE TOWARDS INCREASED ACTIVITY OF THE TRYPSIN INHIBITOR. FACILITY: KAFEDRA VNUTRENNIKH BOLEZNEY NO 2 LENINGRAD. SANITARNOGIGIYENICHESKOGO MEDITSINSKOGO INSTITUTA.

UNCLASSIFIED

Acc. Nr: AP0044845 Ref. Code: UR 0497

PRIMARY SOURCE: Klinicheskaya Meditsina, 1970, Vol 48, Nr 2 , pp 126-129

SOME FEATURES PECULIAR TO THE ORIGIN AND COURSE OF CHRONIC PANCREATITIS

V. G. Smagin, O. I. Yakhontova, L. N. Valenkevich

Summary

In order to elucidate the causes of chronic pancreatitis the authors examined 146 patients. The most frequent cause was the presence of previous chronic diseases of the biliary tract (60.2%). In 13,7 per cent of cases peptic ulcer preceded, in 13,7 per cent — acute pancreatitis, in 4.1 per cent — epidemic hepatitis, in 5.4 per cent — cholecystectomy and in 2.7 per cent — different operations in the abdominal cavity. In the study of the clinical picture special attention should be paid to the so-called latent form of chronic pancreatitis which is not always correctly diagnozed. This form of the disease was noted in 17.7 per cent of cases.

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REEL/FRAME
19771700

1/2 017 UNCLASSIFIED PROCESSING DATE--18SEP70

TITLE--EXCITATION OF KRYPTON RESONANCE LINES BY ELECTRON IMPACT -U-

AUTHOR--YAKHONTOVA, V.YE.

COUNTRY OF INFO--USSR

SOURCE--OPT. SPEKTROSK. 1970, 28(1), 176-7

DATE PUBLISHED--------70

SUBJECT AREAS--CHEMISTRY, PHYSICS

TOPIC TAGS--KRYPTON, ELECTRON BOMBARDMENT, RADIATION INTENSITY

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1980/1318 STEP NO--UR/0051/70/028/001/0176/0177

CIRC ACCESSION NO--AP0049480
UNCLASSIFIED

2/2 017 UNCLASSIFIED PROCESSING DATE--18SEP70
CIRC ACCESSION NO--AP0049480
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE MEASUREMENT OF THE FUNCTION OF THE EXCITATION OF THE KR RESONANCE LINES 123.6 MMU AND 116.5 MMU WAS CARRIED OUT AT THE CURRENT UP TO 500 MUA AND PRESSURES 3 TIMES 10 PRIME NEGATIVE3 -1 TIMES 10 PRIME NEGATIVE2 TORR. THE INTENSITY OF 116.5 MMU LINE DEPENDED LINEARLY ON THE PRESSURE. THE TOTAL FLUX OF RADIATION WAS GOVERNED BY THE RATE OF EXCITATION AND WAS INDEPENDENT OF THE ABSORPTION; ALSO, THE INTENSITY OF LINES WAS INDEPENDENT OF THE ABSORPTION. THE DIFFUSION OF THE RADIATION DID NOT INFLUENCE THE INTENSITY OF 123.6-MMU LINE. THE DEPENDENCE OF THE INTENSITY OF THIS LINE ON THE PRESSURE PROVED THE PRESENCE OF A SECONDARY PROCESS WHICH INCREASED THE EXCITATION OF THE LINE. THE FORM OF THE EXCITATION FUNCTION WAS INDEPENDENT OF THE PRESSURE. THE OSCILLATION STRENGTH OF THE 116.5-MMU LINE WAS 0.135 AND OF THE 123.6-MMU LINE, 0.158. THE ABS. COEFFS. OF THE 123.6-MMU LINE WAS 24 TIMES 10 PRIME3-CM (1 TORR) AND OF THE 116.5 MMU LINE 28 TIMES 10 PRIME3-CM (1 TORR).

USSR

PISKAREVA, N. A., KUZNETSOVA, E. Ye., POPOVA, R. P., BRODOVA, M. D., TRUSHINSKAYA, E. P., and YAKIMANSKAYA, K. I., Leningrad Scientific Research Institute of Childrens Infections

"Virological, Clinical and Immunological Characterization of Hong Kong A2 Influenza in Children"

Moscow, Voprosy Virusologii, No 4, Jul/Aug 71, p 492

Translation: The 1969 influenza outbreak in Leningrad was caused by a new antigenic strain of influenza virus of sero type A2 (Hong Kong). During the outbreak, tests were performed on chick embryos infected with materials collected from 53 patients with sporadic forms of the disease, with eight samples collected from foci, and with 10 samples collected from children who had died of influenza. Twenty-three hemagglutinating agents were isolated and identified as A2 Hong Kong influenza viruses. All strains were sensitive to inhibitors. Serological investigation of paired sera of 388 persons revealed that specific immunological shifts took place in children fairly early. Positive shifts occurred in 40.2% of children aged up to 1 year, which considerably exceeded analogous shifts in a similar group of children in previous years. The express method of immunofluorescent analysis of nose and throat smears yielded positive

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USSR

PISKAREVA, N. A., et al, Voprosy Virusologii, No 4, Jul/Aug 71, p 492

results in 104 out of 165 ill children (63%). Combined positive results by the express method and by the serological method were obtained in about 83% of the total number of individuals examined during the influenza outbreak.

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USSR UDC: 621.374(088.8)

YAKIMANSKIY, A. A.

"An Amplitude Limiter"

USSR Author's Certificate No 262949, filed 30 Jul 68, published 3 Jun 70 (from RZh-Radiotekhnika, No 11, Nov 70, Abstract No 11G207 P)

Translation: This Author's Certificate introduces an amplitude limiter which contains stabilivolts, ballast resistors and protective semiconductor diodes connected in parallel. To obtain the total permissible power dissipation of all parallel-connected stabilivolts at the output, the stabilivolts are connected to the input terminal through individual ballast resistors and protective diodes connected in opposition, these same stabilivolts being connected to the output terminal through semiconductor diodes and an OR logic element.

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USSR

UDC 533.92.621.039.61

FARENIK, V. I., VLASOV, V. V., ROZHKOV, A. M., STEPANOV, K. N., SUPRUNENKO, V. A., and YAKIMCHUK, Yu. V.

"Study of the Radial Structures in the Oscillations of a Plasma Column in Crossed Fields With Cyclotron Resonance Instabilities"

Kiev, Ukrainskiy Fizicheskiy Zhurnal, No 3, 1973, pp 394-396

Abstract: Experimental results are given for the investigation of cyclotron resonance instabilities in a collisionless rotating plasma in a uniform, longitudinal magnetic field. The basic experimental equipment is the same as that described in an earlier article (A. M. Rozhkov, et al, UFZh, 14, 1969, p 1856) except that this earlier equipment used crossed electric and magnetic fields. Experiments with the equipment of the present paper were conducted at a gas pressure of 10^{-5} mm Hg. The curve plotted for the amplitude of the ionic cyclotron oscillations as a function of the uniform magnetic field intensity differs essentially from that for the nonuniform field. It was also found that oscillations of various frequencies were localized in different radial layers, and that the oscillation intensity was of a resonance nature. The authors thank V. L. Sizonenko and V. T. Tolok for their comments.

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USSR UDC 621.371.332.4

SEMAKOV, V. L., KREPAK, V. N., and YAKIMENKO, I. P.

"Scattering of Electromagnetic Waves by Cylindrical Systems With Heterogeneous Gyrotropic Plasmas"

Moscow, V sb. X Vses. konf. po rasprostr. radiovoln. Tezisy dokl. Sekts. 5 (Tenth All-Union Conference on the Propagation of Radio Waves; Report Theses; Section 5--collection of works) "Nauka," 1972, pp 22-26 (from RZh--Radiotekhnika, No 10, 1972, Abstract No 10A377)

Translation: A solution is found for the problem of the scattering of a plane wave by cylindrical objects with radially heterogeneous gyrotropic plasmas. The effect of an external magnetic field, the frequency, and the nature of the radial variation in the electron density of the plasma, is investigated. Six illustrations, bibliography of four. N. S.

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UDC: 8.74

USSR

SHABANOV-KUSHNARENKO, Yu. P., YAKIMENKO, L. I.

"Mathematical Model of Definition of Classes of Identical Words"

Probl. bioniki. Resp. mezhved. temat. nauch.-tekhn. sb. (Problems of Bionics. Republic Interdepartmental Thematic Scientific and Technical Collection), 1971, vyp. 7, pp 103-105 (from RZh-Kibernetika, No 4, Apr 72, Abstract No 4V583)

Translation: A programmed mathematical model of search for classes of identical words is constructed and realized on the "Ural-4" computer on the basis of the set of Russian nouns. The functional scheme of the model is presented in ALGOL-60 algorithmic language supplemented by certain logic operations on words for the description. Authors' abstract.

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USSR

UDC: 62.506.2

SHABANOV-KUSHNARENKO, Yu. P., YAKIMENKO, L. I.

"On a Mathematical Model for Morphological Classification of a Set of Nouns in the Russian Language"

Probl. bioniki. Resp. mezhved. temat. nauch.-tekhn. sb. (Problems of Bionics. Republic Interdepartmental Thematic Scientific and Technical Collection), 1971, vyp. 6, pp 104-107 (from RZh-Kibernetika, No 12, Dec 71, Abstract No 12V1044)

Translation: A program model is constructed and realized for morphological classification of a set of nouns by types of declension. The operating principle of the model is based on the idea of the null-method -- a modification of the cybernetic "black box" method. The model includes procedures (blocks) of word differentiation, recognition, comparison and printout. A central part is played by the recognition procedure which is designed for determining (on the basis of formal features) the type of declension of a given word. Morphological classification of the initial data is realized by comparing the types of declension of each pair of words appearing at the input. Author's abstract.

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1/2 019 UNCLASSIFIED PROCESSING DATE--11SEP70

TITLE--CORROSION RESISTANCE OF A TITANIUM BASE UNDER A PLATINUM COATING IN RELATION TO ANOLYTE PH -U-

AUTHOR--KHODEKEVICH, S.D., VESELOVSKAYA, I.YE., YAKIMENKO, L.M., GUSKOVA, L.A.

COUNTRY OF INFO--USSR

SOURCE--ELEKTROKHIMIYA 1970, 6(1), 135-8

DATE PUBLISHED-------70

SUBJECT AREAS--MATERIALS

TOPIC TAGS--TITANIUM CORROSION, PLATINUM COATING, ELECTROLYTIC OXIDATION, CORROSION TEST, SOLUTION ACIDITY, ANODE POLARIZATION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1987/0757 STEP NO--UR/0364/70/006/001/0135/0138

CIRC ACCESSION NO--AP0104206

UNCLASSIFIED